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DIABETIC SURGERY FROM A MEDICAL POINT OF VIEW*

BY ELLIOTT P. JOSLIN, M.D.

Introduction. My grandfather was a Connecticut farmer and hauled his products to market with a spiked ox team. You know the sort? Next the cart were the oxen, then came the restless steers, and the old mare Nell led them all and set the pace. Spring roads are muddy, and one morning on his weekly trip to town with a load of cord wood, grandfather overtook his neighbor, Captain Jacobs, with his team deep in the mud of a swamp at the foot of a hill. All was in confusion and the Captain's efforts to extricate his load were futile. His horse was excited and covered with sweat, the steers had become unmanageable, and even the faithful oxen had given up in despair. To make a long story short, teams were swapped, and how often I have heard my father tell how grandfather patted old Nell, spoke to the steers, roused the oxen, cracked his whip and with a "Gee-up" urged on his team. Of course the load moved, because each one harnessed to it did his or her best and all pulled together. Thus the story runs that my grandfather dragged out of the mud of Jimmy Dang swamp a mired load of wood, and I believe that in this same fashion surgeons and physicians can and will rescue the surgical diabetic.

Coöperation. Coöperation is the keynote of surgery in diabetes. The surgeon leads the team and sets the pace, but close behind him in his work are those young steers, the laboratories of chemistry, pathology, metabolism and X-ray; and still nearer the load, yoked together, are the nurses and doctors.

Diabetic Laboratories. Without a laboratory at his elbow a diabetic surgeon does not have a show. Without a laboratory he may even be harboring a diabetic unawares. Talk as much as you like about clinical sense and the interpretation of the symptoms of the patient, the exercise of these alone will not avail in diabetes. Clinically I cannot diagnose the onset of diabetic coma even twenty hours before the patient is unconscious, but with the aid of the labora-

tory I can absolutely prove its insidious approach and stop it too. Clinically I can't tell whether a patient is sweating because of his sepsis or my insulin, but with my laboratory I can know in twenty minutes.

Let me tell you my idea of a diabetic clinical laboratory. To me it is no dusty room where the mature inhabitants while at their daily tasks sit and smoke, but a living, breathing organization, housed in a spot where everything is spick and span, and where the alert girls and boys stand and work. It is a place from which I get reports not of the dead, but of the living, not how the patient has been, but of how he is and is to be. A laboratory where the technicians somehow or other know the patients and are interested in helping to get them well. A laboratory which is as ready to teach a visiting doctor a new blood sugar test, as it is to do the same for fourteen year old Jane from Mississippi or for a diabetic child's mother one hundred and fifty miles from Winnipeg. A laboratory which wakes up early and has the day's routine surgical reports charted by 8 and the medical reports by 9, so that they are of some use to the surgeon at his operations and to the physician at his rounds the same day, thus allowing adjustments of diet to go into effect at the noon meal. A laboratory force which recognizes the significance of acidosis and is as eager to stay up all night for a case of coma as a young obstetrician for his first confinement and ever is alert for something new. For the surgeon who does not have such a laboratory I am sorry.

Diabetic laboratories must become more common and the tests performed less expensive. The tests required are simple and are daily becoming simpler. Any doctor can take a few drops of blood from the ear and such a sample, properly collected, will furnish sufficient material for a blood sugar test. A CO_2 test is somewhat more complicated, but is not beyond the skill of a high school girl. The costs of routine tests of the blood and urine are not excessive. Last year at the Deaconess Hospital for \$11,300.00 plus rent, heat, light, water and power, there were

*Delivered in part at the annual banquet of the New England Surgical Society.

performed various tests of blood and urine and other analysis. These are shown in Table 1 in order to demonstrate that routine laboratory work, when carried out upon a large scale, is not expensive.

TABLE 1

LABORATORY WORK AND ITS COST AT THE NEW ENGLAND
DEACONESS HOSPITAL DURING 1925

Urinalyses	Complete	6,656
	Incomplete	16,474
	Miscellaneous	434
Blood Chemistry	Blood sugars	5,706
	Non-protein nitrogens	2,336
	Blood CO ₂	660
	Blood NaCl	156
	Miscellaneous, uric acid, calcium, etc.	732
Clinical Blood Examinations	Microscopical	685
	White counts	775
	Red counts	489
	Smears	125
	Coagulation time, bleeding time, grouping	81
Gastric Contents		143
Feces		379
Sputum		189
Miscellaneous, food, etc.		9
Basal Metabolisms		218
Weightings for insensible perspiration		145
Cost		\$11,300.00

In other laboratories in the hospital are performed most of the gastro-intestinal analyses and estimations of basal metabolism.

As for laboratories of pathology, metabolism and X-ray, who could get along without them and why pretend that you can? It is true a message can be sent by a boy on a donkey, but why not use a telephone? Today we are living in civilized communities and conscience commands that we employ each and every agency a civilized community affords to get our patients well. And yet there exist those who would condemn Medical Schools who train their students to be dependent upon laboratories!

A word about a pathological laboratory. It is a laboratory of hope. It reveals why one patient died, but it suggests how the next can be saved. Most of all it fosters research. When I told my diabetic class that not one of my 8 diabetic children who had died and been autopsied had shown a pancreas completely exhausted and then asked them all for theirs and particularly for that of an old man in the audience, who had had the disease 25 years, and he said I could have it, when he was through with it, the patients applauded and they did so because pathology to them meant hope.

Surgical Diabetics Make Equal Demands Upon Physician and Surgeon. The time consumed in the medical care of a surgical diabetic is just as

great as that required for the surgical care. There is no reason why the surgeon should not act as doctor as well as surgeon for his patient, but should he do so? Has he the time to make detailed physical examinations, to hunt for consumption in the aged and seek for the lesions of arterio-sclerosis in the head, the heart and the legs, to arrange for appropriate laboratory tests, calculate the diet and decide upon and prescribe the ever varying dose of insulin? All of this he must do at an expenditure of time far greater than would be necessary for a doctor who in his daily routine sees many diabetics in contrast to the surgeon's few. For a surgeon to enter into such details I consider it to be a pure waste of his professional capital. Instead he should yolk up with a doctor and along with him haul the load.

The Surgical Diabetic a Serious Diabetic. The surgical diabetic is the serious diabetic, the diabetic who dies. The diabetic mortality for my surgical cases at the Deaconess Hospital for 1923-1926, Aug. 1, is 37 deaths, 11 per cent; the medical mortality during the same period is 28 deaths, 1.7 per cent. See Table 2. Of the total deaths at least 41 per cent succumbed to arterio-sclerosis and cardio-renal disease and at least 71 per cent had arterio-sclerosis in some form. In other words surgical diseases and arterio-sclerosis kill the diabetic today. From coma, a vanquished enemy, there were but 4 deaths even in the presence of 44 coma cases. Since the surgical diabetic is six times as likely to die as the medical diabetic, he needs six times the attention. Seldom is the surgeon to blame for the surgical mortality; most often he is not to blame at all, because the case comes to him too late. As a rule the responsibility is medical and is more often remote than immediate and by that I mean that preventive measures have not been instilled early enough into the minds of the patients. It is not fair to the surgeon, it is still less fair to the doctor and most of all unfair to the patient, if these cases are not given the detailed and intimate treatment which the severest medical diabetics receive. Cases of diabetes in coma are visited by a physician every hour; surgical cases need almost as much care. For this reason it is essential that surgical cases be grouped with medical cases.

Border-line Wards of Medicine and Surgery. Border-line wards for medical and surgical diabetics, and maybe for patients with other diseases, should exist in every hospital. This will save time for the nurse, doctor and surgeon, save money for the hospital and not the least will save the life of the patient. In such wards surgeon and physician should meet on equal terms and appropriate facilities should be afforded for each in his care of the patient, and

also for the nursing of the patients as well. For a hospital to scatter its surgical diabetics hit or miss among its various surgical wards shows old fashioned administrative methods. Surgical wards are far off from the medical service where the nurses are conversant with diabetic diets and where every hour of the day diet kitchen and chemical laboratory are in close contact with the wards and the nurses educated to detect diabetic complications. Such methods show a lack of appreciation of the value of his plant and its personnel on the part of its Superintendent, deficient organizing ability on

been performed upon the entire group in the same interval by surgeons in other hospitals. The figures taken together make one operation for every five diabetics in the course of three and a half years. Should we add to the list those surgical ailments which we know existed, but were not surgically treated, there would be 281 more. And the surgical sum is not yet, because, previously to the year 1923 and yet after onset of diabetes, there is a history of at least 192 notable operations which these same patients survived and these added to the preceding proved that one operation will be needed for

TABLE 2
MEDICAL AND SURGICAL MORTALITIES IN DIABETES
Author's Patients at New England Deaconess Hospital
1923-1926, August 1

Year	Total diabetic admissions	Total deaths	Medical diabetics	Deaths	Surgical diabetics with operation	Deaths	Per cent of operations to diabetic admissions
1923	479	8	410	4	69	4	14
1924	575	21	502	10	74	11	13
1925	571	18	474	8	97	10	17
1926 to August 1	343	18	262	6	81	12	24
January 1, 1923, to August 1, 1926	1968	65	1648	28	321	37	

the part of its Staff, places an unfair responsibility upon the doctors, who so frequently in the end must bear the blame for fatalities, and for the patient adds elements of danger.

Already we have seen that the surgical diabetic is the serious diabetic, but he is the complicated diabetic as well. For nearly half a century he has been accumulating disease and an additional handicap even though slight makes him the easy prey of complications, which like wolves are ready to pounce upon him. Hence the surgical diabetic must be near the doctor too.

Incidence of Diabetic Surgery. I wish I knew the incidence of surgery in the man and child on the street. It is hard to say how many of us escape the surgeon between birth and death or what is more important, ought not to escape him, because of conditions which call for his skill. As I am not familiar with the incidence of surgery on the street, I will record the incidence of surgery among my diabetics.

There have wandered through my diabetic pastures the last three and a half years a few thousand diabetic sheep of whom 2365 strayed in for the first time. Of these there have been 1625 who have grazed in the Deaconess Hospital. Here the surgeons have corralled them or to speak more truthfully I have corralled the surgeons for they have been kind enough to perform upon this flock a total of 321 operations. At least an additional 99 operations have also

every three diabetic patients and I believe more accurate statement to be every other diabetic is a surgical diabetic before he dies.

TABLE 3
INCIDENCE OF SURGERY AMONG DIABETICS,
AUGUST 1, 1926

Total hospital diabetics 1923-1925	1625
Total operations upon above at Deaconess Hospital	321
Total operations upon above elsewhere	99
Total operations upon above previously	192
Total surgical conditions needing operation, but not yet operated upon	281

Among the older diabetics it almost seems as if these stoical and Calvinistic individuals were foreordained and predestinated to surgery. Foreordained, because so many of them have gall stones as an antecedent and possible causative factor of their diabetes, and predestinated, because with time they develop arterio-sclerosis with its surgical complications in the lower extremities or because they become the host of an infection.

The increasing number of diabetic operations at the Deaconess Hospital is significant. In 1923 there were 69 operations or 14.4 per cent of the diabetic admissions. In 1925 the number had risen to 97 or 17 per cent and during the first six months of 1926 to 81 or 24 per cent. On July 19, 1926, the different members of the Staff at the Deaconess Hospital had 18 surgical diabetics under their combined care. The sur-

gical cases have become so numerous and their ailments so vital that they usurp the beds and have compelled us to shorten the stay of medical diabetics to a week and in that brief course of time to teach them how to live for the rest of their lives.

Variety of Operations. Amputations of an extremity or part of an extremity constituted nearly one third (88) of the 321 operations upon my diabetics at the Deaconess Hospital between January, 1923, and July, 1926. See Table 4.

TABLE 4

CLASSIFICATIONS OF 322 OPERATIONS UPON DIABETICS
JANUARY 1, 1923, TO AUGUST 1, 1926

	Total	Fatal*	Per cent
Preventable Surgery			
A. Amputations			
Legs	56	15	27
Arms	2	1	50
Toes or fingers	31	1	3
B. Infections through the skin			
1. Carbuncles	10	4	40
2. Ulcers, abscesses, etc.	46	2	4
Non-preventable and Repara- tive Surgery			
Disease of thyroid	41	3	7
Tonsillectomies	33	0	0
Laparotomies			
1. Gastro-intestinal			
a. Appendectomies	9	2	22
b. Others	15	4†	27
2. Gall stones and disease of gall bladder	13	0	0
3. Hysterectomies	8	1	13
Genito-urinary	19	2	11
Pelvi-rectal	14	0	0
Cataracts	6	0	0
Mastoid and antra	5	1	20
Miscellaneous	14	1	7

*Within one month after operation.

†The 4 deaths followed operations for carcinoma of pancreas (2), liver (1) and sigmoid (1).

Next in frequency are superficial and deep septic processes (56), caused by infections gaining entrance through the skin, such as abscesses and ulcers (46) and carbuncles (10). These two groups, amputations and infections through the skin, make up nearly half of the total operations. Fortunately these, the amputations and the infections, are conditions which are largely preventable and it therefore becomes the duty of all medical men to warn their diabetic patients of the dangers to which they are exposed and thus save needless suffering and death. The mortality from this lamentable half of diabetic surgery is 14.6 per cent and constitutes two thirds of the total surgical mortality. This is in sharp contrast to a mortality of 6.8 per cent for the remaining half of the cases.

Non-preventable surgical conditions and re-

parative surgery are responsible for the other half of the surgical cases. In this second main division, operations upon the thyroid gland (41 cases) and tonsillectomies (33 cases) are conspicuous. Three of the operations upon the thyroid gland resulted fatally, but none of the tonsillectomies. Before insulin tonsils were removed from diabetics with the greatest rarity and then only when forced by compulsion. Diseases of the genito-urinary tract (19 cases) are frequently associated with diabetes, more as an accompaniment of advancing years than as complications. The causes for operation range from nephrectomies for calculi and pyonephrosis to the removal of the prostate. There was but a single operation for phimosis.

Laparotomies (45 cases) of a varied nature were undertaken. In the group, gastro-intestinal lesions were frequent (24 cases) and of these 9 were appendectomies; there were 13 operations upon the gall bladder and 8 hysterectomies complete the group. For these laparotomies the mortality was 15.5 per cent, a figure largely explained by the cause for the operation. The remaining surgical procedures consisted of those about the pelvis and rectum (14 cases), many of which were of a minor nature. Operations upon the eye (6) consisted of removal of cataracts and there were no fatalities. There were also operations (5) upon the mastoid or antra and finally a group (14) of most miscellaneous character, ranging in severity from the excision of an infected wen to amputation of the breast for carcinoma.

Dental extractions have not been classed as surgical operations, although in some instances they might well be so enumerated. This should be considered a compliment to the dentists rather than otherwise. The extractions in many instances were extensive and were they not performed with unusual dexterity, judgment and proper medical supervision they might easily have entailed disastrous results, as happened years ago. The extractions have been numerous and average about a tooth per patient. No fatalities occurred following removal of teeth, tonsils or after operations upon the eye.

The Ages of Surgical Diabetic Patients. Much is written about the advanced ages of surgical diabetic patients. It is the common impression that the age of the surgical diabetic corresponds to that of the members of the New England Surgical Society when your constitution or your assistants compel retirement. Only in part is this true, and I am almost sorry to spoil the illusion, because I like the impression to prevail that my diabetics are no better risks than retired surgeons and that they consequently need as skilled and tender care, which I am proud to say, thanks to your members, they have had. A third (106) of the group is over 61 years and another third (101) between 51 and 60, but this

leaves the remaining third (114) which is the largest third, under 51 years of age. There are also other features relating to the age groups which are not commonly mentioned. It is the group of younger diabetics, the diabetics under 51 years of age, which is growing in numbers and the older surgical group which is lessening. The youngest group is growing because, first, these patients live so much longer now compared with previously that there are more of them and second there is a greater opportunity for surgery, because improved medical methods make operations of election safe. The oldest surgical group of all is diminishing in numbers and should decrease still more, because preventive measures are converting what formerly was major surgery into minor surgery or no surgery at all. In this fashion the doctor's better medical tillage of the diabetic soil is opening up for the surgeons more fertile surgical fields.

Deaths. I am so glad that one-half of the surgical deaths in the past were due to septicemia. Ten of the 17 deaths following amputation of an extremity were due to septicemia present before the amputation. I am thankful because

TABLE 5
CAUSES OF DEATH OF SURGICAL DIABETES
322 Operations—37 Deaths

Cause of death	Number of cases
Septicemia	15
Gangrene	1
Gas bacillus infection of stump	1
Carbuncle	3
General peritonitis	1
Appendicitis	2
Meningitis (streptococcus)	1
Pneumonia	1
Cancer	4
a. Pancreas	2
b. Liver	1
c. Sigmoid	1
Thyroid toxemia	2
Cerebral hemorrhage	1
Chronic nephritis	1
Coronary occlusion	1
Pulmonary embolism	1
Syncope under anesthesia	1
Shock	1

the prevention of septicemia is possible, but the prevention of cancer and arteriosclerosis is not so easy. There were 3 deaths from thyroid disease and two of these might now be averted. The rest of the deaths were from various single causes.

In retrospect it may be said that a few years ago our hope for a better future for medical diabetes lay in the fact that most of the deaths were then due to coma and coma was considered preventable. That hope has been fulfilled. In my last year of practise ending July 1, 1926, there were 1138 cases of true diabetes with 60 deaths and of these 6 cases of coma. I think the 1000 doctors more or less who bore the chief

responsibility for the care of these cases did well. So now it is with surgery and septicemia. I expect it will not be long before earlier treatment and your better methods will largely avert it.

Apparent discrepancies between Tables 4 and 5 are explained by the deaths of patients from other diseases than those for which they were operated upon.

Special Surgical Conditions. I have chosen appendicitis, gall stones, disease of the thyroid, cancer, particularly of the pancreas, and diabetes' legs to illustrate and emphasize certain medical features of diabetic surgery.

Appendicitis. In the diabetic patient appendicitis is as insidious as coma and may simulate it. Case No. 3679 was convalescing in the ward from a septic arm, developed a temperature of 100°, did not complain and denied symptoms until the gangrenous appendix ruptured. Despite operation he died under our very eyes. This happened in 1924 and I report it, because Maurice Richardson taught me to report my unsuccessful cases. Second. My associate, H. F. Root, was summoned to a suburb to see a case of diabetic coma, Case No. 5385, and found moderate acidosis, but diagnosed appendicitis and 6 hours later at midnight D. F. Jones took out a gangrenous appendix and Mrs. B. was discharged from the Deaconess Hospital in 18 days. Third. The reverse of the above. A Turk, Case No. 4740, came to my office a month ago with pain in his abdomen. I suspected an approaching rupture of a gall bladder or duodenal ulcer rather than an appendix, and told him to go to the hospital at once. Through his interpreter he replied that a year ago I made the same remark and for that reason he had stayed away from me since. I then warned him he might die in a day or two, refused to give him medicine and collected an extra fee so that he would the better realize the value of the advice. My diagnosis was wrong, but my advice was sound. Though I have treated over 5000 diabetics I did not weigh the significance of my secretary's report of a positive di-acetic acid reaction in the Turk's urine. Incipient coma commonly, in fact usually, begins with indigestion, vomiting and distress in the epigastrium and as I might have expected he developed coma and was brought back to my office from Providence, the next day, so ill that his interpreter, fearing death in his ear, insisted that my secretary get an ambulance to take him to the hospital a mile away. When he came out of his full fledged coma, blood CO₂ 12 volumes per cent, with 140 units of insulin, lavage of the stomach, salt solution and caffeine each subcutaneously, he became one of my best patients. The fourth case, Case No. 4135, was a woman from whom Dr. Lahey removed a goitre 3 years ago. One day she telephoned me that she felt uncomfortable in her abdomen. I insisted she have a doctor, and

as her own was dead, she took the first she could find who fortunately proved to be Dr. John J. Elliott. He was at once suspicious of trouble and evidently warned her for she came into the hospital during the evening. When the house officer made his rounds she was sound asleep and he did not waken her. In the morning the abdomen was soft with slight but definite localized tenderness, T. 99° but with the white count 23,000. Drs. Root, McKittrick and Clute saw her and largely for safety's sake H. M. Clute operated that afternoon. The gangrenous and ruptured appendix was removed, the local peritonitis drained, while the courageous but feeble patient sat erect for two days, without food save glucose intravenously, the assimilation of which was favored with insulin. Discharged well in 18 days.

Five. A little girl of 12 arrives over the road

only explain this phenomenon it would greatly advance our knowledge of diabetes. I have noted three somewhat similar cases in diarrhea and it makes one recall Guelpa's method of treating diabetes with fasting and Epsom salts. Let us therefore remember that an intestinal fistula in a diabetic, like diarrhea, may raise his tolerance. The patient recovered.

Summary upon Appendicitis in Diabetes. Appendicitis in the diabetic is insidious, almost symptomless, may simulate coma or conversely coma may simulate it, can be successfully operated upon even though acidosis and peritonitis are present and the weakness and sweating of a protracted recovery may be due to an insulin reaction rather than to shock or pocketed pus.

Gall Stones. If you, who are fat and chance to hear or read these lines, could only choose the form of diabetes you are likely to acquire,

TABLE 6
GALL STONES AND DIABETES

Series of supposed diabetics	True diabetic cases	True diabetics with onset at 20 years or over	Gall stones		Average age at onset in years	
			Cases	Per cent	Gall stones	Diabetics
1-1000	906	783	28	3.6	44*	51
1001-2000	865	746	37	4.9	43†	44
2001-3000	834	708	42	5.9	46	50
3001-4000	843	753	39	5.2	50‡	54
4001-5000	809	716	43	6.0	47§	53
5001-	—	—	25	—	—	—

*Average for 21 cases.

†Average for 16 cases.

‡Average for 50 cases.

§Average for 49 cases.

from Amherst, Case No. 5461. She has diabetes according to her doctor, but upon arrival is sugar free in our laboratory. Her grumbling appendix was removed the same evening. After the operation the sugar appeared reaching 5 per cent, thus vindicating her doctor who had treated her well. Prompt surgery saved a tedious convalescence. Her family knew appendicitis and cooperated to an unusual degree. There is a sixth example, Case No. 2128. He is still in the hospital recovering from a general peritonitis, presumably of appendicular origin with which he entered and for which he was operated upon 3 hours after admission. After several days of intravenous glucose feeding plus subcutaneous insulin I noticed one forenoon that he looked weak, exhausted and was sweating. A blood sugar test showed this to be due to hypoglycemia, 0.04 per cent, plainly an insulin reaction resulting from an overdose of insulin. Ten days after operation he developed intestinal obstruction which Dr. McKittrick diagnosed and relieved with an ileostomy and though temporarily he had a fistula it did him good rather than harm, because his tolerance rose and nearly quadrupled reaching 200 grams. If one could

I would recommend the gall stone variety. It is the best of all the types of the disease. Perhaps this is explained by its local etiology. The pancreas is infected from the biliary tract and with the natural subsidence of the cholecystitis or the removal of the gall stones the foci of infection are removed, the islands of Langerhans nearly regain their function, and the diabetes almost disappears.

Gall stones are frequent in the diabetic. Among my first thousand cases there were 28 instances among the true diabetics and in successive thousands the number has increased to 43 in the fifth.

The earliest age at which gall stones developed was at 21 years. In Table 6 I have recorded the frequency of gall stones which corresponds to the number of diabetics at 20 years or above in successive thousands of supposed diabetics and actual diabetics. Diabetes followed the gall stones at an interval varying in the different thousands from a trifle less than a year to 7 years.

The average duration of the diabetes in the thirty-five diabetics with gall stones who have now died was eight years and of the one hun-

dred seventy-four diabetics still living has already reached 7.3 years. This would tend to confirm my statement that gall stone diabetes is the desirable diabetes. The duration of life after onset of diabetes of the one hundred seven patients who were operated upon for gall stones is 6.3 years and of the remainder the duration is eight years. Of the ten who have died subsequently to the operation the duration of the diabetes was 9.3 years.

The possible prevention of diabetes by the early removal of gall stones is a strong reason for operation upon gall stones in the non-diabetic. Therefore I recommend removal of gall stones both in diabetic and non-diabetics when the danger of operation is slight, first for the prevention of diabetes and second because if diabetes is present an operation may alleviate it. Of 13 diabetics operated upon for gall stones under my care during 1922-1925 there have been no deaths.

It would be unfortunate if the impression prevailed that operations for gall stones or appendicitis should be performed only under special conditions and in a few hospitals. My opinion is quite the reverse providing physician and surgeon each knows his task. Case No. 1419 arrived at the Deaconess with her ruptured appendix after a 40 mile ride and died the same night, whereas another patient had her acute appendix removed in Taunton and still another her acute gall bladder removed in Woonsocket and each lived. The surgeon must not be afraid of the diabetic.

Disease of the Thyroid Gland. Here again surgery gives good results not only for the symptoms due to the gland, but frequently for the diabetes. How many Cases Dr. Lahey and I have had together I cannot say, because our statistics are not quite ready for publication, but certain facts relating to disease of the thyroid gland can and should be mentioned in any discussion of surgical diabetics.

First, the increased metabolism of hyperthyroidism is just as harmful to the diabetic as overeating of food and is even more apt to lead to coma, because the endogenous overeating of the thyroid case goes on day and night while the exogenous overeating of the diabetic is usually confined to three meals. You can reduce the diet of a diabetic and thus save his life, but you can't reduce the diet of a hyperthyroid diabetic unless you remove a part of his thyroid.

Second, surgery in the hyperthyroid diabetic is the best sort of a game, because it is exciting and if you know and follow all the rules you are pretty sure to win. At one moment you are confronted with coma, the next confused with thyroid toxicity, and in the following the possibility of an insulin reaction looms up and all in the presence of a fibrillating heart, dehydrated

tissues and a non-retentive stomach. No wonder seven doctors united during one day in the treatment of a single case. This circumstance and the considerable number of cases of coma referred to us have led to the introduction at the Deaconess of a special chart arranged with a line for each hour to cover such emergencies. Fortunately diabetes and goitre are now sufficiently mathematical in character and their symptoms so clear that they can be controlled by science rather than empiricism and with good records one doctor can proceed with treatment where the other has left off.

Third, mark the similarity of goitre and diabetes. Each leads to overeating and in turn to emaciation. Red cheeks and weakness are strangely associated, yet now the former are explained by the excessively high protein diet. Uncontrolled, the metabolism of each is high, over controlled by removal of too much thyroid or extreme undernutrition the metabolism of each falls too low. No wonder before insulin and before modern surgical technic and Lugol's solution the combination of the two was a catastrophe.

Fourth. Surgeon and physician alike must be alert in diagnosis. I think Dr. Lahey will agree that some of his best thyroid cases, often of the thyro-cardiac type, came to him from me and I know that I can reciprocate that many of my most satisfactory diabetics first fed in his fields.

Fifth. A little glycosuria in a thyroid case does not spell diabetes any more than when a little sugar is found in the urine of a patient with gall stones or in the course of pregnancy. The per cent of sugar in the blood clears the diagnosis and this is most essential. Otherwise the diet of a patient with a transitory glycosuria may be unduly restricted and greatly to his detriment.

Cancer of the Pancreas. Cancer of the pancreas seems far more frequent today than in the past. A search of my records only in part confirms this, but perhaps it will be confirmed when as many of my recent diabetics are dead as of the old. The cancer may develop 10 years after the onset of the diabetes, or perhaps may usher in the disease itself. Case No. 896 began in so orthodox a fashion that no one suspected its presence. Insulin is less effective if there is cancer of the pancreas, but it helps to control the diabetic symptoms. So far as my observation goes the development of cancer of the pancreas, unless diabetes is already present, never leads to frank diabetes. My one case in which it apparently ushered in diabetes has not yet come to autopsy. Here is a good opportunity awaiting the joint investigations of clinician and pathologist.

The X-ray helps greatly in the diagnosis of

cancer of the head of the pancreas. Dr. Morrison has taught us at the Deaconess that the wide sweep of the duodenum around the region of the head of the pancreas is distinctive.

Continued loss of weight in an adult diabetic who is under reasonably good treatment with diet and insulin means cancer, tuberculosis or pus. Cancer and tuberculosis are becoming equally rare in those diabetics who are under 30 years of age. Perhaps cancer is more common in a diabetic than in a non-diabetic.

Tuberculosis and diabetes in the United States are about as often associated as tuberculosis is with the population in general, but in the diabetic above 50 years of age tuberculosis appears unexpectedly and one must be constantly on the watch for the lighting up of an old focus. Against this threatening cloud I now strive more and more to insure the general nutrition of the diabetic adult.

TABLE 7
CANCER OF THE PANCREAS IN DIABETES

Series of cases	True diabetes Cases cer	Cancer of Pancreas			Unclassified Cases cer
		Potential diabetes Cases cer	Renal glycosurics Cases cer	Cancer Cases cer	
0-1000	906 1	13 0	0 0		81 1
1001-2000	865 1	11 0	5 0		119 2
2001-3000	834 1	26 0	15 0		124 0
3001-4000	843 4	42 0	8 0		107 1
4001-5000	809 2	47 0	13 0		131 0

The Diabetics' Legs. "Pity the sorrows of a poor old man" was the maxim we were compelled to copy in the primary school writing book. I disliked it then and resent it now. It is so much better to prevent than pity. If one studies the changing mortality of diabetes one will note the steady decline of deaths from coma and the equally steady rise of deaths from arterio-sclerosis. When the sclerotic vessels of the head or heart rupture, are narrowed or become closed, the surgeon cannot help, but when these developments take place in the lower extremities he can rescue the old man or woman from a lingering death. But medical prophylaxis is better than destructive surgery and it appears to be efficacious. Of 55 diabetic patients seeking my care with lesions of the legs which later required amputation I find that 44 had never consulted me before and that eleven, who were former patients, had not been seen for an average period of 2.7 years.

The feet of every diabetic patient should be examined at the first visit. Do this in the presence of relatives, near or remote. The procedure may be distressing for all concerned, but be assured the feet of that patient and his friends at subsequent visits will be more engaging. I should feel proud to have it recorded

on my tomb-stone—"he taught Jew and Gentile to wash their feet."

Around a diabetic's foot assemble many doctors, nurses and technicians. The dermatologist has furnished great assistance because he has taught the best methods for the treatment of epidermophytosis and other affections of the skin and has trained one of our nurses in the use of the ultra violet ray. From the orthopedist and his technician advice about apparatus and shoes has been received and valuable lessons given in the individual training of the patient in bed gymnastics. But the whole care centers in the surgeon and it is simply the duty of the physician to furnish him a subject diabetically in good condition so that he can operate when he wills.

The Marathon Run taught us, like nothing else has, the value of exercise in lowering the sugar in the blood. Therefore, we plan to have the surgical patients who are able exercise as many of their muscles as possible, in order to preserve their carbohydrate tolerance. At the same time a good tolerance for carbohydrates is favored by a diet with caloric values which do not over reach their needs. Incidentally the bed exercises are good preventatives against pneumonia following operation. Besides general exercises local exercises for the extremities are prescribed, because they improve the circulation and thus stop pain. Such local exercises are efficacious and the discomforts of intermittent claudication lessen. Decrease of pain is the most manifest result of local gymnastics, but its invigorating influence upon the healing of ulcers and wounds is undoubted, though less spectacular. The Buerger board which conveniently permits 10 minute cycles of elevation, depression and warming of the extremity six times an hour is of great assistance. We have six of these boards at the Deaconess Hospital and often all in use. I sometimes think of an old man's foot as a parched field in a drought. Of circulation, the rain, there is none and the only revivifying influence at hand is that of the Buerger Board and Ultra Violet Ray which, however, represent in comparison no more than a few drops of heavy dew.

Should amputation of the gangrenous leg of an old man or woman be performed? This is easily answered. If the patient does not consent to it, he is really committing suicide and if the surgeon does not perform it, he is condemning the patient to death. Some surgeons may say they are willing to assume responsibility for such a sentence but first please listen to this letter from Mrs. B., Case No. 3834, who has had both legs removed, the first in 1921 and the other in March, 1925.

"I am getting along very well. I manage to get around in my wheel chair. I have two arti-

ficial legs I stand on and that helps a good deal. I don't walk on them. I made an attempt once and I fell so I thought I would not try again. You would be surprised, doctor, if I could tell you what I can do around my home."

Letters are for sentiment; statistics are for facts and here are data relating to the duration of life of my diabetics after they have had two legs or one leg removed.

Amputation of both legs. During these three and a half years eight of my patients, Cases Nos. 3280, 3519, 3745, 3834, 3866, 5186, 5250, 5334, have been unfortunate enough to require the amputation of the remaining leg. In two instances this was fatal in less than 6 days, in another case, Case No. 4108, not counted in the series, death occurred at the first few whiffs of the anesthetic, which was ethylene, and before the operation was begun; the remaining six cases are alive with an average duration of life since operation of 1.4 years or 85 per cent of the possible duration which the time allows. In Table 8 are recorded the 7 double amputations prior to 1922 and the 8 more recent amputations above described.

TABLE 8

DIABETIC GANGRENE WITH AMPUTATION OF BOTH LEGS
1898-1922

Individual case numbers	Onset of diabetes. Age	Amputations		Results	
		Age at first	Age at second	Dead at age	Alive at age
343	58	62	64	65	
355	58	73	74	79	
895	55	67	71		75
1509	35	48	49	55	
1932	67	61	63		63
2339	63	70	71	71	
2727	53	62	62	63	
1923-August 1, 1926					
3280	52	64	67		67
3519	63	63	64		66
3745	58	58	64		66
3834	68	68	74		73
3866	30	53	64	64	
5186	46	59	60		60
5250	57	60	60		61
5334	58	28	64	64	

Among my patients formerly operated upon while under my care and now alive there is one whose amputation dates back 4 years. One man, Case No. 1509, conducted his large business for 6 years without any legs. One patient, Case No. 5334, was operated upon 30 years before he developed diabetes and his second operation took place 36 years later at 64 years of age when his diabetes was of 6 years' duration.

The total amputations upon 52 patients are recorded in Table 9.

Deaths After Amputations of Legs. Death took place within one month in 15 cases among 56 patients following operation. Nine of these

deaths were due to septicemia and these 9 deaths together with 6 other deaths from septicemia constitute nearly one half of the total surgical deaths from all causes during the three and a half years. These figures show that a more radical and presumably an earlier decision should be reached in such cases. These data may well be cited in discussions with patients and friends upon the seriousness of delay and to persuade them to sacrifice a limb in order to save a life.

All these cases died within a few days of operation, because operation was performed too

TABLE 9

DIABETIC GANGRENE
DURATION OF LIFE AFTER AMPUTATIONS OF LEGS

Year	Amputations* Total	Death		Alive	
		Num-ber of cases	Years of life	Num-ber of cases	Years since operation
1923	10†	4	0.9	5	2.8
1924	16	8	0.5	8	2.0
1925	15	7	0.2	8	0.9
1926, Aug. 1	15	5	0.1	10	0.3

*Including 4 second amputations. Of the 53 persons who underwent amputation, 28 are alive on August 1, 1926.

†Case No. 3269 had a re-amputation of the stump within a month of the first operation.

late. Undoubtedly the debility of the patient was a large factor. One cause of this debility was the interval between the beginning of the lesion and the date of operation, which averaged 16 weeks. This average includes one exceptionally long case. Without this case the average would be six weeks. Another explanation was the duration of the diabetes, 11 years, and its evident lack of treatment as shown in 6 cases. To reduce mortality from septicemia therefore, we must A. prevent lesions of the feet and B. if they occur (1) educate the patient to report them at once, (2) reach an earlier decision, as to when to operate, (3) perform a more radical operation and (4) build up more energetically the vitality of the patient by dietetic and other means.

Medical Rules for Surgical Diabetics Before and After Operation. I append a few rules which guide us at the Deaconess Hospital in the care of our surgical diabetics:

1. Before operation store glycogen in the liver of the surgical diabetic as protection against the anesthetic. Carbohydrate can be given in the form of oatmeal, water gruel, orange juice, or toast and tea without milk.

2. After operation guard against hyperglycemia with its attendant acidosis or hypoglycemia due to lack of food or excess of insulin. For the first 24 hours after operation oatmeal water gruel, ginger ale, thin milk are allowed ad libitum. The carbohydrate should be taken three hours before operation and after operation. The

patient should receive this by mouth, rectum or vein with insulin if necessary to insure its utilization.

Eventually most any surgical diabetic either with or without insulin can adopt a diet about as follows:

Breakfast: grape fruit or orange, oatmeal, egg, coffee and cream.

Dinner: meat or fish in small portion, 5 per cent and 10 per cent vegetables in liberal or moderate quantities, a medium sized potato or one ounce (1 slice) of bread, and an orange or grape fruit, half banana or half a portion of ice cream.

Supper: a meal similar to that at breakfast or less than that at noon. When the patient begins to be active in bed or out, cream can be increased to half a pint, butter and bacon added.

3. Insulin. If insulin has been used regularly by the patient, give the same total number of units in 24 hours, at the time of operation, but divide into smaller and more frequent doses, irrespective of meals. If insulin has not been employed, give it when 2 successive specimens contain sugar and omit it when 2 successive specimens are sugar free. Avoid worry by giving small doses every 3 hours or 4 hours, more rarely 2 or 6 hours, rather than larger doses infrequently, until acquainted with the tolerance of the patient. During convalescence when the urine is sugar free, often test the need for insulin by omitting or reducing a single dose, usually the noon dose first, then the evening dose. It is as important to have a blood sugar test in the late forenoon as before breakfast for a guide to insulin administration.

4. When a surgical diabetic is not doing well, don't blame the diabetes. The treatment of diabetes now rests upon so sure a scientific foundation that if the course of the patient is not fa-

vorable one must suspect a complication. Where is the pus? Was the poor old man exposed to tuberculosis in his youth and has it now come to the fore? Has the frail old lady a carcinoma of the pancreas, which you could not detect when, forced by emergency, you removed her gall stones under novocaine? Remember that diabetes is a good disease, but has bad companions and these have injured her reputation. Attack them, not her.

Diabetic surgery reflects the surgery of the future in that it is largely preventive. We hear much of preventive medicine, we should hear more of preventive surgery. According to diabetic law an infection makes a diabetic worse, but it is the surgical procedure which removes the infected teeth and tonsils, appendix or kidney and brings to an end infections of the feet. According to another diabetic law an increased metabolism transforms a mild diabetes into a severe, but the surgeon intervenes in hyperthyroidism and transforms the diabetic into his original and usually benign state when he removes the thyroid. Gall stones, and they signify cholecystitis, frequently precede diabetes. They too vanish at the hands of the surgeon, who little knows, when he removes them, how often he actually prevents the later development of diabetes.

Formerly there were few diabetics and their span of life was short and firmly bound with chains of acidosis and undernutrition. Today there are many diabetics, because they live longer and insulin has set them free. Surely every third diabetic and probably every other diabetic at some time in the course of his disease needs the surgeon, and will seek him not in vain provided he secures the coöperation of accurate and interested technicians, faithful nurses and doctors conversant with diabetes.

ORIGINAL ARTICLES

THE PERSISTENT URETHRAL DISCHARGE AND ITS RELATIONSHIP TO MARRIAGE*

BY CHARLES M. WHITNEY, M.D.

ONE of the most important problems which the physician is called upon to solve is what advice he shall give to a patient with a chronic urethral discharge who desires to marry. The responsibility of deciding the question of marriage is great enough in cases with a history of gonorrhea in which no discharge is present, but the difficulty is very greatly increased when actual visible discharge is still present.

The usual history in the class of cases under consideration is that the patient has had gonorrhea months or even years before and still has a discharge. This may be continuous or relaps-

ing, mucoid, muco-purulent or purulent in character. It has failed to stop after months of careful treatment by the physician and complete coöperation on the part of the patient. Repeated bacteriologic examinations of this discharge have shown no gonorrheal organisms, indicating that it has become non-specific.

With such a history and with a patient presenting this continuous or relapsing discharge, what advice shall the physician give? On the one hand if he advises against marriage he changes the whole course of the man's life, for this discharge may last years in spite of the most careful treatment. On the other hand, if he does permit him to marry and the later his-

*Read before the Somerville Medical Society, November 10, 1926.

tory proves that latent gonococci were present and infection is carried to the wife, the condition is even worse. Even when repeated bacteriologic tests have failed to show gonococci and he feels sure that other organisms following gonorrhea are responsible for the presence of a persistent discharge, the physician naturally hesitates in permitting marriage for there is always in the background the fear that latent gonococci may be present. The question cannot be evaded but must be answered by yes or no.

Let us consider for a moment another problem somewhat like the one under consideration. The same physician is consulted by a young woman who has a persistent vaginal discharge which has also failed to yield to treatment and who presents, at the time of the examination, a muco-purulent or purulent vaginal discharge. There is no history of any venereal disease, and the anatomic conditions present show that there has been no coitus, or at least no vaginal entrance. Repeated bacteriologic examinations show no evidence of gonorrheal organisms. She wishes to know if it will be proper for her to be married. What answer shall be given to her? I venture to state that scarcely any physician would hesitate to advise her to be married and to assure her that no harm could result. This is also true of most cases of leucorrhea in women where no other symptom than the vaginal discharge is present.

If we permit a woman to marry who has a non-specific vaginal discharge, why should we refuse the same permission to a man who has a non-specific urethral discharge? Granted that the man has had gonorrhea, this disease does get well and other pathogenic organisms take the place of the gonococci and cause the discharge to continue. The real answer is that we are all afraid of a urethral discharge because we associate it with gonorrhea and are less afraid of a vaginal discharge because it is so common and usually not dangerous, except in cases where there has been a known gonorrheal infection.

To understand why gonorrhea so often becomes chronic and is followed by other organisms presenting the common symptom of urethral discharge, it is necessary to recall some of the facts concerning the anatomy of the urethra and supplementary organs.

The male urethra averages about eight inches in length from the meatus to the bladder. The anterior portion is six inches in length; the membranous portion, half an inch; and the prostatic, one and a half inches. Surrounding the membranous portion is the compressor urethrae or "cut off" muscle lying between the folds of the triangular ligament. This anatomic structure is the dividing line between the anterior and posterior urethra.

The mucous membrane is lined by squamous and columnar epithelium. Surrounding it is a longitudinal layer of unstriped muscular fibres and outside of this is another layer of circular fibres. The submucous connective tissue contains elastic fibres which permit its extension during erection. Along the urethra are to be found small glandular structures; at the meatus are two minute openings, the juxta urethral glands, and along the anterior portion are the glands of Littre' and follicles of Morgagni.

In the bulbous portion are to be found the openings of Cowper's ducts leading to the glands which are in the folds of the compressor urethrae muscle in the membranous portion. Beyond the compressor urethrae muscle is the prostatic portion, in which are structures into which lead others which have a most important bearing on the chronicity of gonorrheal infection.

In the median line is the veru montanum and at the top of this is a small depression, the colliculus. On the lateral walls of this are the openings of the ejaculatory ducts. On either side are the prostatic sinuses, into which open from twelve to twenty ducts which lead to many glands in the substance of the prostate.

Connected by the ejaculatory ducts are the seminal vesicles, which consist of two pouches inside of each of which is a central tube with lateral branches and diverticula. In cross section it presents the appearance of a sponge. From the vesicles the vasa deferentia extend to the epididymes. Into any of these structures the gonococci may enter, become latent, or be in turn succeeded by other organisms.

To explain the varying degrees of severity of gonorrhea and the marked differences in its duration and complication, it must be understood that all cases are by no means alike. The reason for these marked variations is found in two important facts; first, that there are different strains of the organisms, a fact pointed out by Rogers and Torrey and other observers. Eleven or twelve strains have been isolated by culture and these vary greatly in toxicity. The second important element to be considered is the individual resistance to the gonorrheal organisms. Hence we see that in an individual with low resistance who is infected with a toxic type of gonococcus, the disease is likely to have a severe and prolonged course. After entrance of the gonococci into the urethra has taken place they rapidly penetrate between the epithelial cells, becoming submucous in twenty-four hours or less.

Microscopical studies made before a purulent discharge has appeared show extracellular organisms, but soon they become intracellular as phagocytosis and the characteristic purulent discharge take place.

The organisms may enter the various gland of the anterior urethra, causing acute or later chronic manifestations, and as the disease progresses it extends by direct continuity of tissue along the urethra until a urethritis of the whole canal is present.

It was formerly supposed that when the infection reached the compressor urethrae it frequently stopped and remained anterior. Just why it should ever do so is difficult to understand, for what is there about the muscular band or the epithelial covering to interfere with its progress? It is a safe statement, within conservative limits, to say that in eighty out of every hundred cases the disease does enter the posterior urethra either with or without acute symptoms.

It is a wise course to consider that all cases do so progress and to apply the treatment which is indicated for posterior infection; namely, irrigation of the whole urethra, prostatic massage, vesicular stripping and the passage of urethral sounds. This should be done before any case is discharged as cured. As the disease progresses the discharge gradually lessens and may even disappear, but there may still remain foci of infection in these various glandular structures. The gonococci may be removed from these by treatment, to be in turn replaced by other pathogenic organisms and thus the discharge is kept up.

Every patient should be told that no case of gonorrhea should be discharged as cured until all available tests have been made to determine the presence or absence of gonococci. It is the purpose of this paper to review these tests and the methods of applying them. Whether or not visible discharge is present these methods are alike and it is advisable to have a fixed routine method of applying them in order that accurate results may be obtained.

FIRST—VISIBLE DISCHARGE

At the time of the patient's visit, the meatus should be inspected before urination and the urethra stripped to see if any discharge is present. We should find out how long a time has elapsed since urination, for it is obvious that if a patient has urinated only a short time before the visit, no discharge will be present.

In most cases of the type under consideration the discharge is present only in the morning, and a slide should be given to the patient to use at that time. Several such slides should be made and submitted to careful bacteriologic examination.

If no gonococci are found, what organisms are present as causative factors in this persistent discharge? In this connection I desire to acknowledge my obligation to Dr. Frank H. Dunbar of Tufts College Medical School for his aid in the solution of these problems. It has been of the greatest value in checking

up the clinical findings. Without such careful tests no patient presenting a continuous discharge can ever be pronounced cured. He states that the predominant organism in the nonspecific cases has been the staphylococcus albus and that it is almost invariably present.

Many other organisms have been found which act in a causative relation to the discharge, and it is probable that no one alone is responsible. It may be stated in a general way that the more mucoid the discharge, the less the probability of gonococci being present. Another interesting point is that in my cases the largest percentage of positive findings have been from this morning discharge.

SECOND—THE URINE

The patient should report with a full bladder and from four to six ounces should be passed, the balance being retained until after massage. Its clearness or turbidity should be noted and if it is cloudy acetic acid should be added. If it clears, this is due to phosphates or carbonates, the latter of which is shown by effervescence. This is not due to any local condition but to diet or faulty metabolism. It is most important, however, that this simple test should be made to avoid a serious diagnostic error. If it does not clear, it indicates the presence of pus or bacteria or both.

Urinary shreds are frequently observed and these usually are found to be of three types; first, those which are light and float to the top of the urine and consist chiefly of mucus; second, larger and heavier ones which sink to the bottom of the glass and are largely purulent but contain epithelial masses; and third, those of the intermediate type containing mucus and epithelium. A urine which is turbid and contains many heavy shreds should be looked upon with suspicion for it indicates a chronic and severe type of inflammation from some part of the urinary tract, but may be caused by other organisms than the gonococcus.

A clear urine without shreds does not prove that gonorrhea is not present, for very often a considerable mucoid discharge is present at the meatus and the urine passed immediately may show no shreds at all. It is equally true that the presence of gonorrhea is not proven by any type of urinary shreds.

After further tests have shown negative results this fact should be made clear to the patient, for otherwise he may go through life gazing with apprehension upon these harmless floating particles. He should be made to understand that the cure of his disease or his fitness for marriage has nothing to do with them.

THIRD—RECTAL EXAMINATION OF THE PROSTATE AND VESICLES

If the patient has retained no urine in the bladder, eight ounces of boric acid solution

should be introduced through a soft catheter. The position used in this procedure is of some importance. To get the best results, the patient should rest upon one folded arm on a chair or stool, and with the other hand hold a Petri glass below the penis to catch any expressed secretion. The shoulders should be lower than the buttocks so that complete muscular relaxation is obtained. The gloved and well lubricated finger should be introduced into the rectum and the size, consistency and sensitiveness of the prostate noted. Beyond the prostate lie the vesicles, and these should be palpated to ascertain any abnormality. The so-called prostatic massage is largely vesicular stripping, for the prostate is too firm an organ to transmit pressure enough to completely expel its secretion for examination, but in cases of inflamed and boggy prostates, massage is a most valuable form of treatment. The index finger should be passed as high as possible to the tip of one vesicle and by a firm but gentle motion its contents should be pressed downward. It is well to start on the left side and gradually pass to the opposite side until the whole area of both prostate and vesicles has been covered. Thus the field is much like a triangle, the apex being the centre of the prostate. Twenty or thirty strokes in this manner is usually sufficient for diagnosis or treatment.

The amount and character of the expressed prostatic and vesicular secretion should be noted and slides at once made for microscopical examination. A rather interesting fact is that occasionally this secretion comes out in a gelatinous form from which a slide cannot be made. If this is allowed to remain exposed to the air for ten or fifteen minutes, it liquefies and can be spread on the glass. In about two cases out of fifty no secretion appears at the meatus and in such cases we must examine the centrifuged urine as will be later described.

The second urine or solution is now passed and should be examined for turbidity or the presence of flocculent masses. Slight haziness or opalescence of the urine is normal, but the presence of masses of detritus is not, and should lead to careful and repeated examinations.

FOURTH—EXAMINATION OF THE EXPRESSED PROSTATIC AND VESICULAR SECRETIONS

This should include both the microscopic and cultural methods, the former of which is sufficient in most cases. If there is no recent history of infection, no discharge and the urine is clear, three negative slides may be considered sufficient to exclude the presence of gonococci. A moderate number of pus cells is not important, for they have no significance.

If, however, a persistent discharge is present, many slides should be made to make sure that no

focus of gonorrheal infection exists in either of these organs.

I wish to express my appreciation of the valuable services of the laboratory of the Boston Board of Health in making many of these examinations. This free municipal service has been of the greatest value to patients of moderate means, for it makes possible the repeated examinations that are usually necessary.

While the test by culture is of great value in the diagnosis of gonorrhea, it has certain disadvantages when applied to the secretion under consideration. Even in acute cases the culture media have to be prepared with great care for the gonococcus is a difficult organism to grow and in these chronic cases the activity is much lessened and hence the gonococcus is harder to grow. The second disadvantage is that other organisms, especially the staphylococcus as shown by Warden, overgrow and conceal the colonies of gonococci. The large number of organisms which may be present in this secretion is shown by a recent article by Redewill, Potter and Garrison (*Journal of Urology*, November, 1926). They have tabulated a report of cultures in 235 cases, and because of its value in estimating the usefulness of the cultural test it is repeated here. They state that staphylococcus aureus is normally present in the urethra.

B. coli	24
B. coli, Staph. albus	14
B. coli, Strep. hemolyticus	4
B. coli, non-hemolytic streptococci	8
B. coli, non-hemolytic streptococci	5
Staph. albus	13
Micro. catarrhalis	7
B. Pfeifferi	5
B. Freedlander	3
Non-hemolytic streptococci	8
Diphtheroids	16
Gonococci	43
Gram-positive rods	18
No growth	62
Total	235

FIFTH—MICROSCOPIC EXAMINATION OF THE CENTRIFUGED URINARY SEDIMENT

This should be carried out in those cases where the secretion does not appear at the meatus after stripping and also in cases of turbid urine with large and heavy shreds. By this test we add one more safeguard against diagnostic error in determining the presence of gonococci.

SIXTH—URETHRAL EXAMINATION

A bougie-a-boule should first be used to determine the size of the meatus, and the largest size which it will admit should be selected. We should observe the presence of any sensitive areas along the urethra and their position noted for later urethroscopic examination. If one or more strictures are present, their size, sensitiveness and tendency to bleed should be noted. One

of the most common causes of a chronic urethral discharge is the presence of a stricture.

This examination shows only the condition of the anterior urethra, and to ascertain similar facts regarding the posterior urethra, metallic sounds should be used. If a 26F sound passes into the bladder without bleeding or extreme sensitiveness, we may rule out stricture in this region as a causative factor.

SEVENTH—EXAMINATION BY THE URETHROSCOPE

With this instrument we are able to inspect the urethral canal and should observe the general color of the mucous membrane. Very often we find localized areas of redness corresponding to the sensitive areas found by the bougie-a-boule and here and there small red spots the size of a pin head showing inflammation of the urethral glands.

In many of the cases I have examined with the Swinburne urethroscope, I have found in the deep urethra on the anterior surface of the veru montanum and along the urethra in front of it areas that bleed so freely from the mechanical pressure of the urethrosopic tube that the view was at once obscured. In other cases the blood has very slowly oozed from several minute points. The pathologic condition in the first class of cases is a granular condition of the mucous membrane, while in the second it is a more superficial erosion. The difference between them is only one of degree of inflammation. These are best treated by direct application of 60 grains to the ounce of nitrate of silver, and it is most gratifying to see the improvement which takes place. Frequently a persistent discharge is cured in this manner.

EIGHTH—DISCHARGE PRODUCED BY CHEMICAL MEANS

To remove the organisms which may exist in the deep layers of the urethra, a so-called provocative discharge is produced by the use of strong antiseptics. The best one is a solution of nitrate of silver, 1-1000, used as an irrigation of the anterior urethra and one per cent instilled in the prostatic portion. The resulting discharge lasts only twelve hours and a slide should be made by the patient the following morning.

It has not been my experience that valuable results are obtained from this method and gonococci have never been found in it if they have been absent in the other tests. Dr. Dunbar states that he has only found the usual staphylococcus albus in such smears.

NINTH—ALCOHOL

In apparently cured cases, drinking hard liquors or large amounts of beer will produce, in

some instances, a mucoid or muco-purulent discharge, and this should be examined for organisms. In the cases of persistent discharge under discussion, very little increase is noted.

TENTH—COITUS

This obviously should never be advised as a test nor permitted until the case is proven to be cured. Nevertheless, all patients are not obedient and some of them will assume the risk of it. In such cases a protective cover should be used and the seminal discharge saved for examination. This is more valuable for a test than the expressed vesicular secretions because it is larger in amount and represents a more complete emptying of the vesicles. A discharge recurring after coitus should receive careful microscopic examination.

ELEVENTH—THE COMPLEMENT FIXATION TEST

This was first introduced by Müller and Oppenheim (1906), and later studied by Rogers and Torrey (1907), and by Schwartz and McNeil (1910-12). It resembles the Wassermann test and depends upon the fixation of complement by an antigen. Much was hoped from this test but the twenty years elapsing since its discovery have not given it a place in diagnosis comparable to the Wassermann test. The clinician wishes to know whether a positive test proves that gonococci are still present and also how long the test remains positive after a cure. Unless these questions can be answered he must still place his chief reliance upon other tests.

A very valuable contribution to the study of the test has been made by Sherman and Norton in connection with study of Vulvo-Vaginitis in Children (*Journal of Urology*, October, 1926). They have carried out a large series of investigations and have used five preliminary tests for selecting suitable complement before pooling sera from guinea pigs and consider that their results are more accurate and reliable than when this is not done. In their controls they made 61 bleedings from clinically positive or suspected cases of gonorrhea, and in 42 or 68.8 per cent the results were positive. In 19 or 31.1 per cent the results were negative. In 48 bleedings from normal adults 44 or 91.6 were negative. They quote the conclusions of Kilduffe as representing the consensus of opinion of most laboratory workers, and as they are of value in estimating the usefulness of this test, they are here repeated in part:

"It is frequently absent in acute, uncomplicated cases, and may not appear earlier than six weeks after the onset.

"In acute exacerbations of a chronic urethritis the reaction is positive in about 80 per cent of cases; in ordinary chronic urethritis with mild prostatic

involvement, the reaction is positive in 30 or 40 per cent of cases.

"The occurrence of an acute complication usually gives rise to a positive reaction.

"A positive reaction may persist for several weeks after a clinical cure, usually lasting from two to three weeks. If obtained later than that, a focus of active infection is probably present. (This, however, is a mooted question, opinions differing with the experience of different observers. Schwartz states that a positive reaction may persist from six to eight weeks after an apparent cure, while Herrold believes it may continue for a year.)

"In cases of gonorrheal arthritis the reaction is positive in from 80 to 100 per cent of cases.

"The reaction has a greater positive than negative value.

"Occasionally a paper has been published which tends to disprove the specificity and reliability of this test. Such criticism has generally emanated from diagnostic laboratories where large numbers of sera were subjected to study regardless of source or clinical data; or from research work based on a small number of cases, with no emphasis placed upon selective technic or comparison of clinical classification with the complement-fixation results."

TWELFTH—INJECTIONS OF VACCINE

The injection of large doses of gonococcus vaccine has been advised, followed by prostatic massage and vesicular stripping on the ground that the organisms may be stimulated by it and

found in larger numbers, but no uniform results have as yet been obtained.

These examinations which I have recalled to your attention are those upon which we base our opinion of a cure of gonorrhea, whether there is discharge or not. No one of these is enough. We cannot depend on the laboratory alone and expect it to give us a final answer, but we should combine a careful and thorough and painstaking clinical examination with the equally thorough and complete bacteriologic findings. If a patient with a persistent urethral discharge passes these tests he may safely be permitted to marry.

After all the best possible proof of the value of these or any tests is that of time. Do these patients that have been permitted to marry show signs of infection themselves or do they infect others? My answer to this must be founded upon my personal experience. In the twenty years during which I have made these examinations no patient has ever returned to me with a history of a return of his disease.

If by these various tests we can remove the worry and dread from a discouraged patient and assure him that he may safely marry, we are well rewarded for our work by his gratitude and appreciation.

THE UNAPPRECIATED VALUE OF ASPIRATION IN CERTAIN COMMON SUPPURATIVE DISEASES

BY GILBERT W. HAIGH, M.D.

IN certain common diseases characterized by the collection of pus in the deeper tissues an early diagnosis is essential for promptly relieving the patient's suffering and for shortening his disability. To wait for fluctuation in these less superficial infections is to jeopardize the adjacent organs from pressure and extension of the purulent process, since fluctuation depends upon the proximity and the size of the abscess, and, accordingly, in these cases is a diagnostic sign, relatively as late, though not so disastrous, as a palpable tumor in cancer of the stomach. To detect pus early, more attention should be paid to the history, particularly, the duration and the intensity of the inflammatory reaction, which determines the pathological conditions; and so, after the persistence of the localized inflammation for three to six days, recourse should immediately be taken to exploratory puncture and aspiration with the needle and syringe. Furthermore, aspiration, though recommended primarily for diagnosis, has proved incidentally, when there have been no contraindications for trying to empty the contents of an abscess cavity, to effect an unexpected cure.

Of the affections for which a tentative aspiration is of unrecognized diagnostic aid there

is first Peritonsillar Abscess, from which so many patients have been allowed to suffer seven to ten days, till the pus has been freed by spontaneous rupture or by one or more belated ineffective jabs made through the narrow aperture of the patient's jaws, held open with difficulty on account of the swelling and the profuse oral secretions. Here, two problems arise; one, to decide when pus has formed and the other, to find just where it lies, for the looseness of the peritonsillar tissues permits the development of an abscess anywhere about the tonsil, above, beside, or beneath. Now, in the presence of peritonsillar swelling with displacement of the tonsil and a history of unilateral sore throat for three to five days according to the degree of the constitutional symptoms, for effectual treatment only aspiration will disclose soon enough the presence or absence of pus and its exact location. After having swabbed the mucous membranes over the most prominent part of the swelling about the tonsil with a two per cent solution of cocaine, one should explore with a needle attached to a syringe injecting a weak solution of novocaine along its path, attempting now and again, especially as soon as the decreased resistance to moving the end of the instrument suggests its entrance into a cavity, to

draw up purulent material into the syringe. Thus having simultaneously anaesthetized the field of operation and located the pus, it becomes possible for one deliberately to incise and drain the abscess and quickly to relieve the patient of one of the most distressing minor affections.

Likewise, in Alveolar Abscess, which usually evolves sluggishly, exploratory aspiration is indicated, because the marked tumor and induration continue to conceal the gathering of pus for several days. It enables one to discover the pus often seven to ten days before fluctuation can be demonstrated, for then it is usually too late to drain the abscess through the oral mucous membrane, and to avert an incision through the skin with the inevitable scar. The local analgesia produced by the injection of a novocaine solution during the exploration, which should be made in good season through the mucous membranes of the gum only, unless it shows the futility of draining the abscess into the mouth, and in that case, through the skin permits the free incision and drainage without resort to a general anaesthetic, which is so commonly required after fluctuation has appeared and necrosis of the jaw has possibly supervened.

Breast Abscess, especially the more deeply seated type, furnishes an impressive example of the advantages of tentative aspiration. Waiting for fluctuation is lamentable, as it often can not be elicited till the glandular tissue has been destroyed by the burrowing pus with the growth of multiple abscesses, that can be drained only by several incisions under a general anaesthetic and after a prolonged period of painful dressings and complete disability. The indication for recourse to the needle is the continuation of a painful, tender swelling, discrete and rather deeply seated, in contrast to the superficial radially diffuse red streaks of Lymphangitis, for more than three to five days, according to the virulence of the infection as manifested by the intensity and duration of the febrile symptoms. This procedure alone renders it possible to detect the presence and the exact site of a purulent exudate soon enough to cure the patient with a simple operation under a local anaesthetic, and with the minimum suffering and loss of time.

Cellulitis, at times confounded with Erysiploid infections, also often presents another problem in timely diagnosis which can be solved easily only by the application of this clinical aid. Here, since the exudate, especially at first, is usually more serous than purulent, the aspirated fluid may require microscopic examination of a stained smear. In this pathological condition, on account of the diffuseness of the infection, several attempts at aspiration may be necessary in either the superficial or the deep

fascial planes or in both, before satisfactory evidence for the absolute indication for operation is obtained. Yet, it is a singularly invaluable adjunct to the five senses of both the physician and the surgeon for clinching a diagnosis without the usual delay of three to seven, yea, ten additional days, and renders possible treatment by a simple minor operation instead of a major operation with numerous slashes and with such unduly slow drainage and even extensive sloughing as to retard convalescence for weeks and even months.

Another disease which is frequently allowed to progress too far before the purulent products of inflammation are liberated is Ischio-rectal Abscess, beginning more deeply in the perirectal tissues in contrast to the more superficial perianal type. There are two reasons for the regrettable tardiness in the recognition of this distressing ailment: one is that the infection starts so far from the external surface that even the common early signs of inflammation as redness and swelling are absent, and fluctuation, the accepted diagnostic criterion for intervention, appears correspondingly late; and the other is that the anal region almost from the first is too sensitive and tender for any rectal examination without an anaesthetic. For a satisfactory examination, which should disclose a swelling on the more tender side beneath the wall of the rectum just above the sphincter, local anaesthesia, produced by infiltrating the perianal tissues with a solution of novocaine by means of the needle and syringe entirely suffices. If there is doubt about the stage of the inflammatory reaction, it is safe to aspirate, with or without a finger in the rectum as a guide, by introducing the needle into the perianal tissues toward the swelling found to encroach upon the rectum. Recently such an aspiration for a purely diagnostic purpose unexpectedly so quickly cured the patient, who had been suffering for three days and confined to bed for one day, that he was able to resume his occupation within a few days. How often are patients pronounced by physicians to be afflicted with hemorrhoids, when an anal fissure, a fistula, or a perirectal abscess has been overlooked on account of the resultant pain and tenderness having precluded an investigation without the ignored help of an anaesthetic!

In Peri-nephritic Abscess, which arises so insidiously, aspiration provides the only means for an early diagnosis. The truth of this becomes evident when one reflects upon the anatomy of the bed of the kidney. The immediate tissues of this are so lax that a large quantity of pus can collect before it begins to exert much pressure upon the surrounding tissues. Of these, the layers of dense fascia and thick muscles offer so much resistance to the direct escape

of the pus, that it spreads in other directions. So, it may burst into the kidney, itself, the bladder, or the colon; or it may invade the pleural cavity and indirectly the lung, the pelvis, or the groin; or, finally, it may erode a vessel causing a phlebitis or pyaemia. Such complications may occur while one is hesitating because of the absence of any local signs of inflammation except tenderness and slight swelling due to edema. On reflection, therefore, to bide fluctuation would be absurd. Surely there is no region where even repeated exploratory punctures can be done more harmlessly than in the middle third of the loin; specifically, at a point two to three centimeters from the free end of the twelfth rib, which curves rather sharply downward toward the crest of the ilium, internal to the tip of the rib and at the same level as the tip, itself, straight through the *Latissimus Dorsi* and the outer edge of the *Quadratus Lumborum*. As the pleura reaches to the level of the inner part of the twelfth rib, one should avoid the upper third of the lumbar region. If, as the needle is introduced five to seven and a half centimeters, it is moved alternately from side to side, the entrance of its pointed end into the abscess cavity is easily detected by the lessened resistance of the fluid contents to the play of its free end. During this procedure suction, itself, tried several times if necessary, will reveal the purulent matter soon enough to favor the ready cure of the condition without complications or sequelae.

There is one other common disease, Adenitis, in which the diagnosis can not infrequently be facilitated and treatment occasionally accomplished by aspiration. Two illustrations will show this better than a general discussion. A child, age ten, presented behind the angle of her jaw, a solitary enlarged gland, two by three centimeters, of two weeks duration, rather firm and tender, non-fluctuant, and movable. With local anaesthesia the gland was explored with a hypodermic needle and presumably completely drained of four cubic centimeters of pus, for all signs of inflammation quickly disappeared and the patient was promptly cured. Another example of Adenitis, in which one was justified in deviating from the rule of widely opening an abscess or if possible excising it in toto, that is worth citing, is that of a woman, forty-two, who, three months before after a few weeks of unsuccessful nursing, had weaned her only child on account of the diminishing supply of her breast milk and persistently sore nipples. She complained of a lump in her armpit, first felt ten or twelve days before, when it was somewhat painful and tender. Again, a single subcutaneous mass, the size of an English walnut, ovoid, firm, movable, only a little tender without any external inflammation or any fluctua-

tion: obviously an enlarged gland, without any source of origin other than the nipple, which, three months before when it was cracked, served as the port of entrance for the micro organisms, which remained dormant for nearly three months. This conclusion was inevitable, because of the negative history of any wound upon any part of the arms and breast for three months and the absence of any signs of such, as well as of any tumor in either breast, and of any other abnormally palpable gland in the axillary, supraclavicular, or cervical lymphatic chains. Exploratory puncture revealed pus and aspiration, which was repeated five days afterward, fully relieved the patient.

In conclusion, instead of waiting for fluctuation, which is a tardy sign found in these different deeper suppurative diseases, prompt resort to aspiration is advocated in order to insure an early diagnosis and to expedite the appropriate treatment. In those instances, moreover, in which the causative organisms of the infection seem from the slowness of the onset, the mildness of the course, and the smallness of the extent to be of low virulence, drawing out as much pus as possible, at least at the time of the original exploration, not rarely will effectually remedy the disease.

THE USE OF INSULIN IN SURGERY

J. A. Nixon, writing on this subject in the *Bristol Medico-Chirurgical Journal*, summarizes his conclusions as follows:

The principal uses of insulin in surgery are:

1. To enable diabetic patients to combat infection either with or without operation.
2. To render safer for diabetic patients surgical operation whether urgent or deliberate.
3. To protect diabetic patients against the dangers of anesthesia.
4. To furnish glucose in an oxidizable form to patients, whether diabetic or non-diabetic, who are suffering from shock.

Fisher's method of treating shock is as follows:

A sterile solution of glucose is used, preferably of 10 to 15 per cent. strength, 500 to 2,000 c.c. may be given depending on the severity of the condition. It should be injected slowly, taking at least an hour, preferably two to four hours (for dilatation of the right heart is a real danger). The amount of insulin injected depends upon the amount of glucose injected. For every 3 grams of glucose 1 unit of U.20 insulin should be given. The total amount of insulin to be given should be divided into two equal doses, and one part given a quarter of an hour after the intravenous administration has begun, the remainder at the end. So long as there is glycosuria there is no danger of an overdose of insulin. Other drugs may interfere with or influence the effects of this treatment. For instance, adrenalin will counteract the insulin, pituitrin diminishes and sometimes nullifies the sugar-fall, ergotoxin given previously increases the effect of insulin.

DR. WILSON G. SMILLIE of the International Health Board addressed the Rockefeller Institute for Medical Research, New York, on January 7, on "The Influence of Natural Factors in the Distribution of Disease."

**Case Records
of the
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 13041

**CHRONIC ARTHRITIS FOLLOWED BY
COMA**

MEDICAL DEPARTMENT

An American Negro fifty-three years old entered for the first time June 24, seven years before his final admission, after a year of treatment in the Out-Patient Department for swelling and aching of the left wrist of ten years' duration. The wrist was treated at first for an infectious arthritis. Later the diagnosis was changed and he was sent to the wards for operation.

Examination showed a very muscular, powerful man. The heart showed no enlargement to percussion. At the apex was heard a faint sweeping systolic murmur, not transmitted. At the base the aortic second sound was greater than the pulmonic second and was slightly roughened. The lungs, abdomen and genitals were negative. The left wrist was protected in all motions on account of pain on jerk. The whole left arm and the fingers of the left hand presented a marked degree of atrophy. Over the medial carpus area was a marked swelling on the dorsum of the hand. The palmar surface was also slightly swollen. There was pain on pressure at the base of the first metacarpal and over the pisiform bone. In the area of greatest swelling there was fluctuation. Motions of the wrist were limited by pain to a few degrees of flexion and extension. There was apparently great thickening of the tissues between the lower ends of the radius and ulna extending several centimeters above the locus of greatest swelling. Both feet were markedly pronated.

It was decided on the Orthopedic Service to continue immobilization for a time without basking or massage. June 26 he was discharged with the wrist in a cast.

After leaving the hospital he was followed at the Out-Patient Department at irregular intervals. He wore his splint until it wore out. Three years later he reported that pain and swelling had recurred. X-ray of the wrist showed extensive destruction of the metacarpal bones and the articulations between them. There was also destruction of the lower ends of the

radius and ulna and the proximal ends of the fourth and fifth metacarpals. There was evidence of periosteal proliferation over the lower end of the radius. The bone showed some atrophy. He was not seen again for two years and a half. Then he came in complaining of his right knee. The wrist was now painless, although X-ray showed progression of the process. A diagnosis of hypertrophic arthritis was made on the knee and an elastic knee cap was given in November, five years after his previous hospital stay. There was swelling of three-quarters of an inch at this time. By X-ray both knee joints showed a similar appearance, slight thickening about the joint margins, narrowing of the joint space, spur formation about the margins of the joints and on the under surface of the patellae. "The findings are characteristic of arthritis, hypertrophic type." The process in the wrists and hands had progressed steadily since the last observation and had destroyed the proximal carpal bones and the joints. There was very little bone atrophy in any of the films taken. The lower end of the radius showed rather well marked periosteal proliferation. April 12, a year and a half later, the right knee was swollen, tender and hot.

April 12, seven years after his first admission, he reentered the wards. He now gave a history of some pain in the knees for twelve years which doctors had told him was due to his pronated feet. Arches gave some relief. Two years ago the right knee began to bother him a good deal and to swell. An elastic cap gave some relief. The pain and swelling had however steadily and slowly increased until for the past three months he had been practically bedridden. When the pain and swelling were most marked there was great increase in heat in the region. He had lost the power of extension of the knee, and pushed it down with the left foot. It occasionally "locked" temporarily in flexion.

The family history and past history show nothing important.

Examination showed a well nourished man in pain, looking ill, and unable to walk. There was marked bilateral arcus senilis. The right knee was greatly swollen. No abnormalities of the heart, lungs or abdomen are recorded. The right knee was three inches larger than the left at midpatella. Flexion was limited by pain and swelling to fifty degrees and extension to twenty-five degrees. The tissues were tense, the capsule only moderately thickened. The patella floated. Fluctuation was easily elicited. There were markedly increased heat and tenderness all over the knee. There was loss of power in the quadriceps due to pain. The left wrist showed thirty degrees flexion, extension 180 degrees only. Adduction and abduction 5°-10°. The wrist showed marked destruction of the

carpus, loss of motion and atrophy of the wrist, hand and bony prominences at the radial and ulnar styloids.

The urine was negative. The blood is not recorded.

Before the aspiration the temperature was 98° to 99.2°, the pulse 82 to 102. The respirations were normal throughout except for increase to 20-31 May 1-3.

X-rays of the left knee joint showed well defined peripheral changes about the margins of the articular surfaces and of the patella. There was some narrowing of the joint space at the inner half of the joint. The plates of the right knee joint were rather unsatisfactory. There was a marked destructive process involving the left carpal joints and portions of the adjacent bone, and periosteal proliferation in the lower end of the radius. There were hypertrophic changes about the margins of the interphalangeal joints of both hands, and a destructive process involving the articulation between the first metacarpal and the trapezium on the right. Well defined proliferative changes.

April 14 under local anesthesia a large caliber needle was introduced laterally to the right patella and 130 cubic centimeters of yellowish fairly thick fluid was obtained. It showed 480,000 leucocytes, 80,000 red cells, sugar 7, sodium chloride 545, non-protein nitrogen 31, total protein 7.841. The blood plasma showed sugar 83, sodium chloride 544, non-protein nitrogen 22, total protein 8.525.

April 17 operation was begun, but was not completed because of accidental contamination of the wound. There was some elevation of temperature and pulse that night. The throat was reddened. By April 25 the wound was clean and healed by first intention. May 1 the operation was completed. By May 6 the swelling of the knee was much less. There was continuous serosanguineous ooze from the wound. May 20 the patient was discharged.

October 23 he was brought to the Emergency Ward drowsy and apparently not well oriented. No history was available except that the day before he complained of headache and during the night was irrational. His temperature in the Emergency Ward was 102°. He moved his arms about and turned his body restlessly. He answered questions slowly and not clearly. His neck was moderately stiff. There was slight Kernig on the left. The right leg was in a cast.

A lumbar puncture gave 15 cubic centimeters of slightly turbid fluid. A faint pellicle formed. First tube slightly bloody. Cells, 360 leucocytes, 34 per cent. polynuclears, 66 per cent. lymphocytes, no organisms, initial pressure 270, pulse and respiratory oscillations normal, jugular compression right 340, left 330, combined 410, return right 260, left 230, combined 240,

after withdrawal of 5 cubic centimeters 120, after withdrawal of 5 cubic centimeters more 50, total protein 133, sugar 34, goldsol 1112221000, Wassermann negative. Culture showed staphylococcus albus.

When seen in the medical wards he was slightly irrational, moving his arms and legs restlessly. The neck showed moderate stiffness. Lung examination was unsatisfactory, as he was uncoöperative. The heart was enlarged. There was an apical systolic murmur. The aortic second sound was accentuated. The blood pressure was 200/140. The left leg showed slight Kernig. The fundi were negative.

The urine is not recorded. Blood examination showed 7,900 to 3,500 leucocytes, 45 per cent. polynuclears, 24 per cent. lymphocytes, 19 per cent. unclassified, hemoglobin 80 per cent., reds 3,210,000. Wassermann negative.

Temperature 101.2° to 104.9°, pulse 103 to 139, respirations 22 to 31.

The patient went into deepening coma. The temperature remained elevated in spite of alcohol sponges. The pulse was rapid but full. October 24 he would not swallow, and was fed through a nasal tube. The neck was stiffer than the day before, but the Kernig was still only suggestive. There were no reflex changes. Another lumbar puncture gave 40 cubic centimeters of very slightly turbid fluid, initial pressure 320, pulse oscillations normal, respiratory oscillations marked; no block. After withdrawal of five cubic centimeters pressure 225, after ten cubic centimeters 170, after forty cubic centimeters 10, alcohol, and ammonium sulphate positive, total protein 125, sugar 32, chlorides 696, goldsol 1112221000, Wassermann negative.

The afternoon of October 24 the patient died.

DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

We cannot make any diagnosis on the basis of the facts given in the first paragraph. At the time of his discharge however I think we ought to make some guesses as to what the trouble might have been. This case is rather far away from the things I know anything in particular about, but I suppose the two conditions we should naturally think of are (1) tuberculosis and (2) Charcot's joint, which is connected with syphilis. It is much more like the second than the first. The large amount of destruction with comparatively little pain, the process going on all this time without external suppuration, I should suppose was Charcot's joint. If it was Charcot's joint there should be some evidence in other parts of the body, and as we have no evidence of syphilis it makes me hesitate about saying what I have.

The X-ray plate shows the two wrists side by side, and we can see how much destruction there is in the upper picture.

If I am right in what I have been supposing hitherto, this trouble in the knees is a perfectly separate thing and has no connection with the process in the wrist. The record speaks of both wrists. I did not know he had anything in the right wrist.

This "locking" very often occurs in a hypertrophic process with spurs.

We have had nothing except arthritis complaints and treatment up to date. But this is a medical case, so there must be something further.

NOTES ON THE PHYSICAL EXAMINATION

This is the opposite of a hypertrophic process,—a destructive and atrophic process.

The fluid from the right knee was practically pus, so he had a septic knee.

It seems that they did not sew up the wound after the first operation.

MISS PAINTER: They did not do the operation. They made the incision and stopped.

PRE-OPERATIVE DIAGNOSIS

Tuberculosis of the knee.

OPERATION

Ethylene. The plan had been to do a biopsy. On cutting down to the synovia however it was opened and a tremendous gush of pus ensued. Further examination disclosed a completely necrotic joint with only a few small flakes of cartilage left lying loose on the bone surfaces. A tremendously thickened synovia was present. A complete block dissection of the synovia and the necrotic peripheral bone was done, although of course material was scattered throughout the wound by the original gush of pus. The erosion was of the usual type, with no effort to cut down to normal bone, as the task seemed hopeless.

PATHOLOGICAL REPORT

A large area of ulcerated and injected synovia with the underlying panus and fragments of eroded articular cartilage. Microscopic examination shows a dense fibrous membrane the surface of which is covered with a wandering cell infiltration containing focal collections of epithelioid cells.

Tuberculosis.

FURTHER DISCUSSION

A man who has had tuberculosis of the knee comes in with meningeal symptoms and shows a lumbar fluid characteristic of meningitis, presumably tuberculous, because he had tuberculosis and because the cell count shows what we

should expect. The staphylococcus albus I think we may suppose to be contamination.

The second lumbar puncture gave fluid about as before.

DIFFERENTIAL DIAGNOSIS

I should say he died of tuberculous meningitis, which in view of the positive report upon his knee joint is the only natural thing to think of. If he had any other kind of meningitis which could have killed him so quickly he would have had more polynuclear cells in his spinal fluid, and very possibly some visible organisms.

About the left wrist I do not know that we shall ever know. Dr. Mallory was not permitted to examine this wrist, and so far as my own opinion is concerned I have nothing more to say. It does not sound to me like tuberculosis of the wrist or anything else except Charcot's joint. But Charcot's joint goes with syphilis, and there is as yet no evidence of syphilis. It goes also with some diseases of the nervous system of which there is no evidence at all in this case.

Then we have this evidence of a high blood pressure which I do not think can have been all due to his meningitis, although I do not know enough to say that it could not. I should suppose he would have a hypertrophied and dilated heart corresponding to the blood pressure.

MISS PAINTER: He had antisyphilitic treatment without improvement.

DR. CABOT: So somebody must have thought at some time that it was possibly syphilis.

I am sorry we have not one of the orthopedic men here to discuss this wrist more than I am capable of doing.

MISS PAINTER: The diagnosis at the first admission was tuberculosis.

DR. CABOT: Aside from tuberculous meningitis, what else did he have? Well, tuberculous meningitis is ordinarily connected with a general miliary tuberculosis, and often does not show itself in any other way than in the brain and nervous system. I should think that on the doctrine of chances it was more probable that he had a miliary than that he had an isolated meningeal tuberculosis.

Aside from that and the heart, I do not know anything to predict as to Dr. Mallory's findings.

A PHYSICIAN: Did the microscope show tubercle bacilli?

DR. CABOT: No.

A PHYSICIAN: Is it not common to have hypertrophic arthritis with tuberculosis?

DR. CABOT: I do not know.

A PHYSICIAN: You allude to the fact that Charcot's joint may be due to some condition other than syphilis.

DR. CABOT: Yes, it sometimes comes in progressive muscular atrophy, in amyotrophic lateral sclerosis and in syringomyelia.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Tuberculous meningitis.
Tuberculosis of right knee.
Operation, arthrodesis of right knee.

DR. RICHARD C. CABOT'S DIAGNOSIS

Miliary tuberculosis.
Meningeal tuberculosis.
Tuberculosis of the knee.
Charcot's joint (wrist).
Hypertrophied and dilated heart.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

Tuberculosis of the right knee.
Tuberculosis, miliary.
Tuberculous meningitis (very early).

2. *Secondary or terminal lesions*

Arteriosclerosis.
Arteriosclerotic nephritis.
Syphilis of the aorta.

DR. MALLORY: We were allowed to open the knee-joint in this case, and that showed a very much swollen knee, the cavity containing a large amount of turbid yellow-brown fluid with a considerable amount of fibrin in it. The joint capsule was greatly thickened, the surface covered with fibrin. The articular surfaces of the bones were roughened, reddened, rather spongy, with no traces of the normal hyalin cartilage left.

The case did show miliary tuberculosis, with almost innumerable lesions throughout all the organs. The heart showed considerable hypertrophy, weighing 460 grams. There was slight uniform dilatation of all the cavities. The valves were essentially negative except for a little calcification around the base of each cusp of the aortic valve.

The coronary arteries were negative, but the very smallest of the surface vessels in the epicardium showed very slight beading along them which at first I thought might be a periarteritis nodosa; but after finding the miliary tuberculosis everywhere else in the body I think almost certainly they are other miliary tubercles. The ascending aorta and arch were practically negative; but beginning with the first portion of the descending aorta there were widespread yellow atheromatous plaques and calcification, and also between these areas numerous small pitted scars with radiating rugae leading from them, and definite destruction of the muscular layer beneath,—lesions that in gross are almost certainly diagnostic of luetic aortitis.

The brain showed very marked congestion of all the vessels, and very slight thickening of the pia on either side of the vessels,—just a trace of infiltration. There were no absolutely definite

tubercles to be made out. Dr. Ayer, who saw it at the time, thought that there was no question that it was a tuberculous meningitis, but an extremely early one. There was marked arteriosclerosis in the vessels in the circle of Willis, and the choroid plexus showed some tiny white patches which were probably tuberculous.

The fluid from the right knee-joint showed quite numerous tubercle bacilli on smear.

DR. CABOT: In view of the syphilitic aortitis would you have any opinion about that wrist?

DR. MALLORY: No, I have not. We were not allowed to examine it, and it seems to me it could almost equally well be tuberculous or luetic. We have the etiology for both present in the man, and it would be very hard to decide. I certainly do not know enough about the clinical differentiation to say.

DR. NATHANIEL ALLISON: This patient was treated on the Orthopedic Service of the Massachusetts General Hospital, and a diagnosis was made of tuberculosis of the knee and tuberculosis of the wrist. There seemed to be no reason to suppose that the wrist involvement was other than tuberculosis, though of course the possibility of syphilis with an arthropathy had to be considered both in the knee and in the wrist. Long duration of the wrist involvement (eight or nine years) is not to be taken as against tuberculosis. Frequently tuberculosis will run a very low-grade chronic course in the joints of the upper extremity, especially the wrist and the elbow. At operation on the knee, microscopic examination of the tissue removed showed the definite focal collections of epithelioid cells as typical of tuberculosis. I am inclined to believe that the destructive process in the knee and wrist of this patient was due to infection by the tubercle bacillus.

CASE 13042

A CASE OF JAUNDICE WITH RIGHT-SIDED ABDOMINAL PAIN

MEDICAL DEPARTMENT

An unmarried Nova Scotian housemaid twenty-six years old entered from the Out-Patient Department October 29. The chief complaint was jaundice of three weeks' duration.

Four weeks before admission her symptoms began with sore throat which lasted two days. She had slight nosebleed. On the third day a sharp pain in the lumbar region began, and dull pain in the right side of the abdomen extending somewhat into the right flank from the ilium to the ribs. These pains were constant for two weeks. After a week jaundice set in. At its onset she was weak and felt faint. She consulted a doctor and took magnesium sulphate. Eating and fatigue aggravated the symptoms.

Food increased the soreness, especially on the right. Fats, sweets and meats nauseated her. The pain was not relieved by the belching of gas, but was relieved to some extent by pressure. At the onset she did not sleep well, but when the jaundice commenced she slept better. For a week her appetite had not been good. Since the onset of the backache her urine had been dark and her stools clay colored and sometimes foamy. During the third week the pain on the right side was worse. During the third week her feet, lower legs, hands, forearms and face became swollen. Two days after the onset of this she stopped work. She had tingling in the edematous parts for five days. The jaundice was worse at certain times, most intense she thought four days before admission. Backache was now less pronounced, but there was a "sore spot"

accompanied by nosebleed and headache. At nineteen her periods ceased for six months. Three months ago they recommenced after another cessation for a year. When not flowing she had pain and epistaxis when the periods were due. She took Lydia Pinkham's remedy with relief. This was the only patent medicine she had used. For two years she had been troubled by loss of hair. She worked from six in the morning to eight or ten at night, and had no recreation. She showed average intelligence, and her story was believed to be reliable.

Examination showed an obese, smiling woman with moderate jaundice of the skin and sclerae. The apex impulse of the heart was felt in the fifth space. The left border was 10 centimeters from midsternum, 1 centimeter outside the mid-clavicular line. The sounds were of good qual-

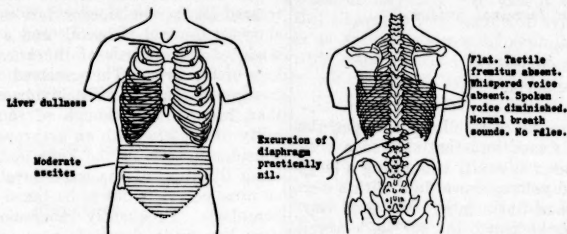


FIGURE 1

over the lumbar spine. Except for a visit to the Out-Patient Department she had been in bed for five days. The pain in the side was aggravated by exertion and relieved by rest. Three days before admission her abdomen became distended by fluid. She had had some headache over the top of the head, worse when the pain in the side was worse. She had noticed soreness and itching inside the left ear. She had a bad taste in her mouth in the morning. She had some palpitation of the heart, worse at the onset. She urinated twelve times by day and twice at night. There was soreness in the vulvar area on urination. She had been nervous, irritable and slightly worried.

Her family history showed nothing of significance except that her mother had heart trouble.

The patient had had chickenpox and measles. Three years ago she had pain, ruptured drum and discharge from the left ear for two weeks followed by slight deafness in that ear. During the past year she had had dull midsternal pain in the afternoon about every two weeks, stopping with rest. She had occasional palpitation with a feeling of something pressing on the heart from below. For a year she had had dyspnea and palpitation on severe exertion. She spent only five to fifteen minutes in eating her meals. Her catamenia always began with pain and were

ity. The pulses and arteries were normal. The blood pressure was 110/95 to 125/85. The lung signs and liver dullness were as shown in Figure 1. The patient complained of tenderness over the left side of the midabdomen on percussion but not on palpation. She said the skin was not sensitive. There was some tenderness on the right side to palpation. Nothing was made out because of the large amount of fluid. Rectal examination was negative. Vaginal examination was not done. Both legs were enlarged and the subcutaneous tissues seemed very firm, but no true pitting was obtained. The pupils and reflexes were normal.

The amount of urine was normal when recorded. The urine before operation was cloudy at three of four examinations, red brown or brown at three, specific gravity 1.024 to 1.032, sugar at one, bile at three, once in very large amounts, granular and cellular casts at one, apparently fine granular and brown casts at another, but some may have been cellular bile stained, rare casts at a third, a few leucocytes at three, rare red blood cells at two. Renal function: bile staining made the reading very inaccurate, but it was probably 40 or more. The blood showed 8,100 to 9,300 leucocytes, 67 per cent. polynuclears, hemoglobin 80 to 85 per cent., 4,624,000 to 4,848,000 reds, slight variation in

shape at one smear, none in the other, no variation in size, some cells moderately achromic once. Icterus index 60 October 29, 75-100 November 4. Wassermann negative. Non-protein nitrogen 29 milligrams. Bleeding time 2 minutes, coagulation time 12 to 16 minutes. Fragility test: hemolysis began 40 per cent., hemolysis complete .36 per cent.; control, hemolysis began 48 per cent., complete 42 per cent.

X-ray showed the esophagus normal. The stomach was in the high transverse position. Peristalsis vigorous. No filling defects. The duodenal cap filled with some difficulty, but appeared to be normal. The head of the barium column was in the descending colon. The tail of the column was in the terminal ileum. The cecum appeared normal.

November 1 abdominal paracentesis was done. The abdomen was entered in the usual location. Before it was completely drained the needle slipped back through the peritoneum and could not be reinserted on account of the struggles of the patient. 3300 cubic centimeters of bile tinged fluid and foam was withdrawn, specific gravity 1.009, icterus index 15, cells, 150 leucocytes, reds negligible, no organisms, 96 per cent. lymphocytes, 4 per cent. mononuclears (only 20 cells found); cultures, Loeffler's no growth, agar and broth, bacillus subtilus.

Before operation the temperature was 97.5° to 99.2°, the pulse 78 to 135, the respiration 13 to 34.

A medical consultant reported, "Unable to make a diagnosis. It seems to me that most probably there is a mechanical situation which blocks both the common duct and the portal system. Infectious jaundice, Hanot's portal cirrhosis, could not do this unless there is some queer complication. New growth in the region of the foramen of Winslow could. So far can get no lead as to probable cause. Have never seen infectious jaundice with ascites. Compare physical examination of abdomen with that of a week ago and then tap. Then do complete routine examination. Follow coagulation time, as surgical interference may be necessary." A surgical consultant reported October 31 (?), "I am unable to add anything to the above. I cannot imagine any new growth or infection that would shut off the common duct and portal vein without some other definite evidence. I am unable to suggest any diagnosis that would fit the case. I cannot advise operation as I cannot imagine anything which would be accomplished." The physician who saw the patient in the Out-Patient Department reported November 4, "Abdomen to-day definitely more prominent than on October 25. No marked signs of ascites at that time, though some fluid may have been present. Liver and spleen were not palpable at that time. I believe there was slight

pitting edema of the ankles, less than the appearance led me to expect." A second surgical consultant reported, "I cannot make a diagnosis that will account for both the ascites and the icterus, but suspect that the lesion is one that is intrahepatic and cannot be helped by surgery. Exploration might prove harmful on account of the hemorrhagic tendency that will increase unless at operation it is possible to relieve the biliary obstruction, which I think is in all probability intrahepatic." November 4 the first medical consultant reported, "It is possible to find in the literature cases of jaundice and ascites due to glandular enlargement with pressure on the common duct and portal vein. Several have been reported apparently due to chronic pancreatitis. It seems to me that surgical drainage of the gall-bladder at least would be worth while, with very rapid exploration." A third medical consultant reported, "In addition to the possibility of benefit there is a bare possibility of relieving the condition should it prove to be remediable trouble with the duodenohepatic ligament. It seems to me justifiable and desirable to explore the abdomen." November 6 (?) the first surgical consultant reported, "It must be definitely understood that operation may prove to be a very serious procedure. However, if an exploratory operation is desired, I shall be glad to do it. The patient's blood should be grouped and a donor at hand. Calcium should be given, but with the patient eating so well I can see no use in giving intravenous glucose." A fourth medical consultant reported November 10 (?), "I do not know what she has. I think she probably has fluid in the left base of her chest. She has enlarged veins over the sternum. I think she has a polyserositis. Her jaundice is not marked this afternoon, i. e., it varies from day to day, which is against a tumor obstruction. Enlarged lymph nodes in abdomen and chest might explain the whole picture (or new growth). I see no reason for haste in operating, as I cannot see what is to be gained by operation other than diagnosis."

The patient was given intravenous calcium and parathyroid to decrease the coagulation time before operation. After an ampule of parathyroid this decreased to about three minutes. November 9 she had tenderness in the right upper quadrant. That night she was coughing slightly. The pulse was 130, the respiration 35, the temperature only 99°. She felt a little more asthenic than during the past three or four days. Examination of the chest disclosed nothing remarkable except for high diaphragm and an inconstant râle here and there at both bases. Nov. 11 a portable X-ray film showed both diaphragms apparently unusually high. The lung fields were very small. It was difficult to say whether the dullness on the left

was due to high diaphragm with respiratory excursion or to fluid. Fluoroscopy showed the diaphragm to move, with clear costophrenic angles. There was a shadow seen near the heart—collapsed lung? The visiting physician found the lung signs as shown in Figure 2 and thought the high diaphragm was not enough to account for the findings.

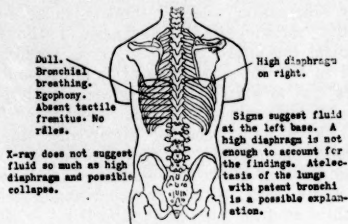


FIGURE 2

A chest tap was done just medial to and one interspace below the angle of the left scapula. The needle was inserted full length in all directions. No fluid was obtained. That evening she vomited about seventy-five cubic centimeters of light colored not very odorous acid material with some food particles. (This was the second portion. The first was not seen.) Guaiac was negative. Microscopic examination showed nothing unusual.

That day operation was done. Next day the patient was unable to retain fluids and was visibly going downhill. The pulse was 110, the temperature normal. November 14 she vomited black material giving a weakly positive guaiac. That day she died.

DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

1. The three common causes of jaundice are gall-stones, cancer and that which we used to call "catarrhal" and is now often called infectious. There are many rarer causes, but those three should be in the foreground of the mind.

2. "Three days before admission her abdomen became distended by fluid." I do not know how she knew it was fluid. She must have seen a doctor again and he perhaps told her.

3. "Three years ago she had pain, ruptured drum and discharge from the left ear for two weeks followed by slight deafness in that ear." That is the side apparently where she has been having soreness now.

4. This story of menstruation makes us think that the trouble was really going on a good deal longer. The cessation of menstruation in

women is apt to be an indication of some serious disease, but does not point to any one disease.

5. Let us put together the facts up to the physical examination. The two outstanding symptoms seem to be jaundice and edema. If she were an older person that certainly would prejudice me in favor of the diagnosis of some sort of abdominal malignant disease such as might easily produce both symptoms. At her age however that diagnosis is not so secure. It is not likely at twenty-six to be malignant disease, although it is possible. I get the impression, although nothing definite was said about it, that this is an afebrile disease, which fact is against infectious or so-called toxic jaundice such as we get with sepsis. The soreness of the left ear is a little suggestive of sepsis. I do not see anything else that suggests it. We have a certain amount of localization,—the pain in the region of the right loin and upper quadrant. But not very much is said about that lately, so that I am still in the dark as to diagnosis. It does not sound like any one of the common things.

NOTES ON THE PHYSICAL EXAMINATION

That is a perfectly normal heart and circulation. So far as examination goes I cannot attribute her shortness of breath or edema to that cause.

The liver dullness extends higher than it should. It might be due to pushing up of the diaphragm, and the liver with it, by the ascitic fluid below.

Now as to these signs in the back, it is very surprising that there should be normal breath sounds when everything else is diminished. I think we should have found them to be diminished if we had been there. It is natural first to suppose that there is fluid in the abdomen and that the diaphragm is high. That would give all these signs in the back. We do not often see it quite so high as that, but a high diaphragm is the first explanation. The second one of course is fluid at both bases, and with the edema that she has elsewhere it is quite reasonable to suppose that it is fluid. I do not see any way as yet that we can tell which of these two things it is. That seems to be all we get out of the diagram.

"Nothing was made out because of the large amount of fluid." This is the kind of case that you can tell nothing about until you draw off the fluid; then you ought to be able to feel something.

"Both legs were enlarged and the subcutaneous tissues seemed very firm, but no true pitting was obtained." That is interesting. It is the condition you get in myxedema, a firm tissue that seems as if it were going to be edematous, but it does not pit. The loss of hair and

the cessation of menstruation both go perfectly well with the diagnosis of myxedema. One does not expect fluid in the abdomen with that. We have to have something else to explain that.

A STUDENT: What do you say as to the kidney?

DR. CABOT: I do not see any disease there. The location of the pain in the beginning might make us suspect kidney. However, I do not think we should.

A STUDENT: How about the blood?

DR. CABOT: I think that is normal blood. Achromia does not change quickly. If you get it one time you get it the next time.

The icteric index is very greatly increased. The normal is about five.

So far there is nothing that I can see. There is not a single abnormal sign in the physical examination so far.

I agree with the medical consultant. He was apparently unable to make a diagnosis. He feels that they ought to get more after tapping.

The surgical consultant agrees also. He is a very conservative man. Many surgeons under similar conditions would say, "Because we do not know, we had better go ahead, operate, and see."

Apparently this ascites has come very rapidly. The first medical consultant has been looking through the literature. Of course chronic pancreatitis is a favorite diagnosis, but almost never is it backed up at necropsy. I have never known of a case of chronic pancreatitis (believed to be a cause of death) being backed up at necropsy.

The fourth medical consultant found something no one else noticed,—enlarged veins over the sternum. He thinks she has a polyserositis. That is another diagnosis very seldom verified at necropsy.

PRE-OPERATIVE DIAGNOSIS

Cirrhosis of the liver.

OPERATION

This patient was operated upon against the advice of all the surgeons who saw her. The operation was done at the request of the medical consultant. Under ethylene and local anesthesia the abdomen was opened through a small incision splitting the right upper rectus muscle. The abdomen was found filled with fluid. The right lobe of the liver was about the size of a medium sized grapefruit and the left lobe about an inch and a quarter in diameter. The middle portion of the liver felt very firm, the outer portion considerably softer. The abdomen was closed without further examination. No drainage.

FURTHER DISCUSSION

It evidently was not a very successful operation.

That is apparently either a cirrhosis or an end result of an acute yellow atrophy. Of course we did not get a chance to exercise our diagnostic abilities because we were given no account of what the abdomen showed after tapping. All we had was the jaundice and the ascites. As I understand this account of the liver I do not see what else it could be other than acute yellow atrophy or cirrhosis. Of these two acute yellow atrophy is much commoner, but from the description it does not sound like that.

Dr. Mallory says that the patient went downhill very rapidly, so very likely we might have had more evidence if we had known that.

After tapping examination failed to show anything in particular. It did not show any tumor, that is the main thing. I suppose that would make us think that something was wrong in the liver. The causes of jaundice in the liver itself aside from gall-stones and cancer are cirrhosis, ordinarily alcoholic cirrhosis, and the other thing I have already mentioned, acute and subacute hepatitis (yellow atrophy) and syphilis. I never knew of a case of syphilis of the liver as a cause of death. You see it ordinarily when the patient dies of something else. Then there are the rare things like parasitic disease of the liver or abscess, which certainly ought to show at such an operation as was here done and which I think can be ruled out. So that I come back to the same two that I have mentioned several times, and of those I should say that a subacute hepatitis of the type that used to be called acute yellow atrophy is a little more probable.

A STUDENT: Would your diagnosis account for the cessation of menstruation?

DR. CABOT: I do not see that it does.

A STUDENT: Do you suggest anything as to the etiology?

DR. CABOT: No. We know no etiology of yellow atrophy in most cases. The point brought out just before you spoke is a good one. The long period of menstrual cessation is more like something else than acute or subacute hepatitis, which could not go back a year. Cirrhosis of the liver would do perfectly well. But we have no evidence at the operation or before of collateral circulation such as we generally get with cirrhosis. It is strange that it was not mentioned either at the operation or the physical examination.

A STUDENT: The first one of the consultants mentioned glands.

DR. CABOT: They are rather high. They should be lower down. I do not believe that many of the consultants thought much of them.

A STUDENT: One of the things they questioned was whether acute yellow atrophy was possible with ascites.

DR. CABOT: We see it here repeatedly with

ascites. There is no question about it at all. I should say more than half have ascites.

A STUDENT: Did you say that previous to the operation the main findings were those of jaundice and ascites? What diagnosis would you make?

DR. CABOT: Either cirrhosis or acute yellow atrophy.

A STUDENT: Which type of cirrhosis?

DR. CABOT: I am talking about the only common type that I know anything about, the alcoholic type so-called.

A STUDENT: Do you get jaundice with that?

DR. CABOT: Yes, quite a considerable percentage. I think about twenty-five per cent.

A STUDENT: On what besides ascites are you basing your diagnosis?

DR. CABOT: Jaundice, ascites, a relatively short illness and the size of the liver. The thing that is absent is a characteristic mental state which usually resembles uremia,—a confused, delirious, semicomatose state, and in all the data we have in our record that is not mentioned. Apparently she went down very fast at the end.

A STUDENT: How about the pain?

DR. CABOT: I do not account for the pain.

A STUDENT: Would she not be apt to get vomiting with acute yellow atrophy?

DR. CABOT: No, many cases do not.

A STUDENT: How do you account for the swelling of the arms and legs?

DR. CABOT: I do not know. I considered myxedema earlier. I do not now think there is the least chance of that.

A STUDENT: Do you rule out cancer on the basis of her age?

DR. CABOT: If we did not have that operation I do not see how we could rule it out. I think it would have to be considered certainly before the abdomen was tapped. After the abdomen was tapped they examined and felt nothing. Before the operation there was nothing except the age against it.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Cirrhosis of the liver.
Acute yellow atrophy.
Jaundice.

DR. RICHARD C. CABOT'S DIAGNOSIS

1. Acute yellow atrophy, or
2. Cirrhosis of the liver.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesions

Acute yellow atrophy of the liver with early cirrhosis.

2. Secondary or terminal lesions

Hydrothorax.

Ascites.

Jaundice.

DR. TRACY B. MALLORY: The case is one of acute yellow atrophy.

The peritoneal cavity was distended with about three or four liters of brownish red fluid containing a few red cells which settled out on standing. There was a fresh blood clot about four centimeters in diameter resting upon the coils of the ileum and binding them together. That is interesting in view of the surgical consultant's opinion that hemorrhage was fairly probable in this case. There was definitely more than is to be expected after the average exploratory abdominal operation, but it was not however enough to be a factor in causing the patient's death.

The duodenum showed three very shallow ulcers at the beginning of the first portion. The edges were quite flat. They were almost certainly very recent things, a matter of weeks rather than months or years. They could possibly have accounted for the recent pain in the story.

The left pleural cavity contained about a liter of fluid, the right only a few cubic centimeters.

The liver weighed 865 grams. The left lobe was almost completely atrophic. The other lobes for the most part were indistinguishable in one large mass which consisted chiefly of the right lobe. This felt very soft and cystic on external examination, but when we attempted to cut into it it was astonishingly tough. From the cut surfaces bright yellow nodules stood out very prominently. The specimen as you see it is dull green, but when fresh was quite bright yellow. The nodules were embedded in a mass of thick fibrous tissue in which bits of necrotic material could be made out. The normal liver structure was quite unrecognizable. The yellow islands in this liver represent foci of regeneration, while the necrotic tissue is pinkish in color. Her history dates back about a month, which I think is probably the time at which the acute necrosis took place. Whether that was due to the sore throat that she had or not I do not know. Occasionally there is a suggestion of a bacterial toxin in some of these cases, more often there is not. The only other possibility was the Lydia Pinkham's vegetable compound, but, considering the quantities of that which are taken, it is very improbable. The reason I mentioned it is that some of the other patent medicines have caused such cases. In this hospital there were four or five cases which were believed to be due to the taking of another proprietary product which is also occasionally used for menstrual difficulties. She had definitely not taken that however.

The other organs were essentially negative except for the ovaries, which showed a fairly marked thickening of the capsules. On section the ovaries appeared to contain the normal number of ova for a young woman.

I think you would have to classify this liver as an early cirrhosis on the basis of an acute yellow atrophy. Recovery from this disease is by no means so rare as the text-books say, and in such patients live fifteen or twenty years longer we find cirrhotic livers which fall into a distinct classification of their own. She lived long enough for the cirrhosis to get well started, and probably the onset of the ascites dates from the period at which she began to get marked fibrosis in the areas of necrosis.

Dr. CABOT: I do not think that my auditors had a fair chance. There were fifteen diagnoses of acute yellow atrophy handed in. Most of the diagnoses were of malignant disease somewhere, which was a perfectly proper thing to expect on the basis of the information you had. There were a good many diagnoses of Hanot's cirrhosis. I am going to give you a piece of personal advice not to make that diagnosis. No one ever comes out right with it. It is a thing that occurs almost exclusively in the books. Chronic pancreatitis I would also warn you about. It occurs not so much in the books as in the surgeons' accounts of operation, but the pathologist does not find it. So just on general principles I would advise you not to make a diagnosis of chronic pancreatitis or of Hanot's cirrhosis. I was rather surprised that so few people thought of ordinary alcoholic cirrhosis, which it seems to me could not possibly have been excluded in this case. Of course we do not expect it in a young woman of twenty-six. By alcoholic cirrhosis I mean the cirrhosis that follows the taking of alcohol. Of course you do get cases indistinguishable from the ordinary type of cirrhosis in which you get no history of alcohol, and you also get a considerable number of alcoholics without cirrhosis.

Dr. MALLORY: No one has ever, of course, been able to produce alcoholic cirrhosis by giving any animal alcohol, and although it is probably possible that you could get plenty of human volunteers for the experiments, I know a controlled experiment has not been done yet. The point of view that possibly not alcohol alone is the factor seems like the most probable one at the present time. I think most people believe that it is much more apt to occur in people who travel in the lower classes of society in which the alcohol that has been drunk is not of good quality. That is not universally true, but I think there is some evidence for saying that alcohol plus some other complication is the necessary combination to get an alcoholic cirrhosis. Dr. F. B. Mallory believes that the so-called

alcoholic type of cirrhosis is absolutely characterized by the presence of a peculiar kind of hyalin in the liver cells, and it is possible to find occasional cases of cirrhosis of this type in which there is no history of alcohol. He had one such case in a girl of sixteen, where the history was unquestionably reliable, but they are very rare. On the other hand they had one case at the Children's Hospital which they thought was alcoholic cirrhosis,—two infants between two and three years, twins, who had been brought up on beer since they were six months old. Take your choice.

CASE 13043

A LATE COMPLICATION FOLLOWING GASTRO-ENTEROSTOMY

SURGICAL DEPARTMENT

A Canadian-American male forty-six years old entered November 20 complaining of vomiting and foul taste in the mouth.

Seven years before admission he had a posterior gastro-enterostomy for duodenal ulcer performed at another hospital. He was completely relieved of his symptoms for over three years. He then had occasional attacks of pain, and noticed tarry stools and vomiting of blood on one or two occasions. Four months before admission the pain ceased and he began to have marked diarrhea with constant nausea and frequent vomiting of very foul material.

Nineteen years before admission he had appendectomy, thirteen years ago cholecystectomy, eight years ago a touch of influenza. He had slight cough. His habits were good.

His father died of Bright's disease, his mother of stomach trouble. His wife had had no pregnancies in twenty-one years of married life.

Clinical examination showed a thin, wiry man. The teeth were stained. The glands of the axillary, epitrochlear, inguinal and femoral groups were enlarged. The heart and lungs were normal. The abdomen showed the scars of three incisions, two upper right rectus and one lower right rectus. Rectal examination showed a small mass of thrombosed internal hemorrhoids on the posterior wall of the anal canal.

Before-operation the amount of urine is not recorded; specific gravity 1.010-1.014, a very slight trace of albumin at all of three examinations, rare leucocytes at two, rare red blood cells at two, rare hyalin casts at two. Blood: hemoglobin 75 per cent., reds 4,650,000, leucocytes 3,600, polynuclears 84-62 per cent. Wassermann negative. Fasting contents of stomach: free acid 70, total acid 90, guaiac negative; test meal, free acid 60, total acid 90, guaiac negative.

X-ray. The stomach contained no six-hour residue. It emptied almost immediately through the gastro-enterostomy, so that the pyloric end could not be well visualized. The first portion of the duodenum also could not be well made out. The gastro-enterostomy was functioning properly. A barium enema showed that the colon filled normally as far as the middle third of the transverse colon. At this point the stomach began to fill also, as well as the remainder of the colon. There appeared to be a small amount of small intestine connecting the stomach with the colon, although this point was not absolutely certain. Following the barium enema air was forced into the colon, which was rapidly filled. The stomach was also distended by this air, and the patient soon began to belch.

After the barium enema 200 cubic centimeters of barium was washed from the stomach.

November 26 operation was done. The patient did very well after it, had no vomiting or nausea, and by the 29th was taking limited fluids by mouth. After December 4 the temperature was normal. Except for a parotitis which developed in the ward he made a good convalescence until December 5. That day he had severe abdominal cramps requiring morphia. He afterwards passed gas and fecal matter by rectum. December 17 he left the hospital relieved, with the wound still open and discharging slightly.

DISCUSSION

BY LINCOLN DAVIS, M.D.

This case does not present a problem in clinical diagnosis, for the X-ray settled that quite conclusively. As a matter of fact Dr. Howard, who referred the patient to the hospital, had already made the diagnosis. It does however represent an unusual and interesting condition which presents quite a problem in treatment.

The salient features of the case are gastro-enterostomy for duodenal ulcer seven years previous; complete relief of symptoms for at least three years; then recurrence of pain similar to that preceding his original operation with some evidence of bleeding. Later the pain ceased and he began to have marked diarrhea, loss of appetite and vomiting of foul material. The X-ray explains just what had occurred.

DR. CAMP: This is the film made at the time the stomach was examined. It shows only the rapid exit of the barium through the gastro-enterostomy stoma. A rapid exit is frequently seen in some types of gastro-enterostomy. It depends on the type of gastro-enterostomy done and the size of the opening. I do not think there is any clue to diagnosis in that. The diagnosis is arrived at by barium enema. Gastrocolic fistula is as a rule associated with a jejunal

ulcer, and I think this illustrates very well the combination of the two. This shadow represents the colon and this is the stomach. We see the colon fill up, and while we are waiting the stomach begins to fill and of course the diagnosis is apparent. The patient evacuated the barium and air was introduced, together with a small amount of barium. This sometimes helps to delineate tumors not readily seen with barium alone. In this case the air is visible in the upper stomach, having gone through the connection between the colon, the jejunum and the stomach. It is strange that he did not show more signs of gastrojejunal ulcer. The signs we look for are some dilatation of the stomach, six hour stasis, and deformity about the stoma. This is a most reliable sign, and apparently was not present in this case. In fact, none of the signs were present.

The diagnosis of gastrojejunal ulcer is not so reliable as other lesions of the gastro-intestinal tract, and I doubt if the X-ray can be relied on to diagnose this condition in over twenty-five per cent. at most.

DR. DAVIS: Supposing you had not given an enema, might you have missed it?

DR. CAMP: I think we should have missed it unless the patient was examined a short time later. Of course the rapid filling of the colon in so short a time would probably arouse suspicion.

DR. CABOT: Why were the stomach and colon hitched together here?

DR. DAVIS: That was the result of the ulcer. It was evident that he had a fistula between the stomach and the colon.

PRE-OPERATIVE DIAGNOSIS

Gastrojejunocolic fistula.

OPERATION

Gas-ether. On exploration the pyloric portion of the stomach was found buried in adhesions which separated rather easily. The portion of the stomach which contained the fistula was freed from adhesions. There was a large opening admitting a finger from the colon into the stomach, also from the jejunum into the stomach. The colon was separated from the stomach, and the jejunum likewise. Although the wall of the colon was considerably indurated there was no sign of an ulcer either here or at the site of the stoma between the jejunum and the stomach. The colon was closed longitudinally, causing some constriction of the lumen. The opening in the jejunum was then closed transversely. The pyloric third of the stomach was then resected. There was very definite evidence of an old ulcer in the second portion of the duodenum. Some trouble was encountered in closing the duodenal stump on account of

tension and induration due to the old ulcer. The jejunum was united to the stomach by the Polya method, retrocolic. A catheter was then inserted into the transverse colon distal to the suture line, with its end passing through the narrowed segment.

PATHOLOGICAL REPORT

The pylorus and adjoining portions of the stomach measuring 7 centimeters along the lesser curvature. Along the greater curvature at the cardiac end there was an oval perforation measuring 4 centimeters in diameter with smooth purplish-red margins. A microscopic examination shows no evidence of malignant disease or chronic ulcer.

FURTHER DISCUSSION

This is an extraordinary thing. Dr. Cabot asked how it occurred. I think there is no question that it occurred as a result of gastrojejunal ulcer which perforated into the colon. When one does a posterior gastro-enterostomy the colon is in close proximity to the stomach and to the anastomosis, and occasionally this does occur. I have heard of a surgeon who anastomosed the colon to the stomach thinking he was doing a gastroenterostomy. This did not occur in this case. The original operation was done by a competent surgeon and the patient had been perfectly well for over three years. So that although I could not demonstrate ulcer at the operation I think he had had one which had perforated, and after it perforated it healed and sealed off and made a fistula.

The opening in the transverse colon should have been closed transversely, i. e., the suture line transverse to the long axis of the bowel. It is extraordinary how, if one has an intestine with an opening in it and closes it longitudinally to the long axis of the bowel, if there is any induration, even with a small defect, the lumen is narrowed very much. So that we always close an opening in the small intestine such as a gastro-enterostomy stoma transversely. The transverse colon seemed big in this case and it did not seem necessary to close it this way, but in the easiest way. As a result of that the lumen was made very small.

The catheter was inserted because we feared we should get an obstruction at the point of narrowing.

Dr. Hartwell wanted to know why we took that piece of the stomach out. The procedure is more or less empirical. It has been supposed that in these cases of gastrojejunal ulcer removal of a generous section of the stomach will remove the acid-bearing portion of the stomach and prevent future ulceration. I asked Dr. Cannon about this acid-bearing portion, and he said so far as he knew there was no physiological

basis for that assumption. He thinks there is just as much acid formation at the cardiac end as at the pyloric end.

This man had a perfectly terrific post-operative parotitis. I thought it was going to form an abscess, but it apparently discharged into his mouth and subsided, and he recovered. Of course he had a very foul mouth as a result of the fistula, and it is not extraordinary that he did develop a parotitis. But it is a very severe complication, often a fatal one,—a parotitis after a laparotomy.

DR. CABOT: Where was that tube exactly?

DR. DAVIS: When we sewed up the colon it was very narrow. It reduced its lumen so that I was afraid of obstruction. We can reduce the lumen of the small intestine very considerably with safety. It has fluid contents and the walls will usually dilate all right. But here was this section of the transverse colon reduced to one-third of its caliber or less, and I was afraid that the fecal contents would not go through it. So we opened it at the distal portion and passed a catheter through the narrow part. The catheter was infolded in the bowel wall in a way similar to the Witzel method of making a gastrostomy. As a matter of fact it drained very little. We left it in a week or ten days, then took it out. The wound healed up and he had normal movements. It was simply a safety valve.

A PHYSICIAN: There were severe abdominal cramps on the 5th.

DR. DAVIS: I think very likely. We were rather worried about that narrow place. He did have some cramps and a little distension. I think very likely there was a slight obstruction.

A PHYSICIAN: How long was the tube in?

DR. DAVIS: I do not remember exactly, but I should say eight or nine days. We left it in until we began to get movements by rectum. Then we knew it was no longer necessary.

DR. CABOT: Is there any way to prevent such a parotitis as this? Do mouth washes do any good?

DR. DAVIS: I do not know that they do. I am sure that every patient who has bad teeth and a bad mouth ought to go to the dentist and have his teeth cleaned and take care of his mouth previous to operation. But I do not know that mouth washes just before the operation would do very much good.

DIAGNOSIS

Gastrocolic fistula.

THE BOSTON Medical and Surgical Journal

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ADOLESCENT ALBUMINURIA

THE occurrence of albuminuria in apparently healthy boys has frequently been a source of worry to parents and of mystification to the family physician. While it has been generally believed that the phenomenon was not one of serious import, very little has been known as to its causation or prognosis. The observations of H. H. Bashford (*The Lancet*—December 25, 1926) on a number of cases of this condition followed for a considerable period of years are therefore of much interest. This author reports that in a consecutive series of 1000 boys of 14 years of age examined by the Headquarters Medical Department of the British General Post Office between July, 1924, and April, 1926, 58 were found to have albuminuria. In a second group of 500 males between the ages of 14 and 30, albuminuria, without any apparent organic disease, was present in 41.

30 cases of albuminuria detected in boys examined prior to 1909 were examined by Bashford in 1909, 7 to 14 years after the discovery

of albuminuria. In six of the 30, albuminuria was still present. 24 of these were reexamined by him again in 1926, six having left the postal service. Although only one of the 24 showed a persistence of the condition, Bashford believes that more frequent and careful examination would have shown it to be present in other cases as well. In his conclusions, he states that in a considerable number of instances the condition persists for many years, if not for life, but that its presence is consistent with a perfectly normal life of physical efficiency.

Of the six cases who had left the postal service, one had died of acute nephritis. Of the others, two were untraced, and three left the service on account of some physical disability in no way connected with the kidneys. In 40 of the 43 cases of the first series who were examined repeatedly, and in 30 of the 41 cases of the second series, albumin was found to be absent from the morning or after-rest specimens.

Bashford concludes, therefore, that in the great majority of cases of true adolescent albuminuria, the after-rest specimen is usually free from albumin. As to the causation of the albuminuria, his researches yield only negative evidence. The condition, he states, is "not definitely associated with any particular type of youth or man, with a so-called 'nervous' disposition, with lordosis, oxaluria, or a history of scarlet fever."

THIS WEEK'S ISSUE

CONTAINS articles by the following authors:

JOSLIN, ELLIOTT PROCTOR, A.B.; M.D. Harvard Medical School 1895; Consulting Physician, Boston City Hospital; Physician to New England Deaconess Hospital; Clinical Professor of Medicine, Harvard Medical School; Member of American Society for Advancement of Science, American Academy of Arts and Sciences, and American Medical Association, etc. His subject is "Diabetic Surgery from a Medical Point of View." Page 127. Address: 81 Bay State Road, Boston.

WHITNEY, CHARLES M., M.D. Harvard Medical School 1887; Professor Genito Urinary Diseases, Tufts College Medical School; Member American Urological Association. His subject is "The Persistent Urethral Discharge and Its Relationship to Marriage." Page 136. Address: 386 Commonwealth Avenue, Boston.

HAIGH, GILBERT W., A.B.; M.D. Harvard Medical School 1910; Visiting Physician to the Worcester City Hospital. His subject is "The Unappreciated Value of Aspiration in Certain Common Suppurative Diseases." Page 141. Address: 167 Lincoln Street, Worcester.

The Massachusetts Medical Society

STATED MEETING OF THE COUNCIL

A STATED meeting of the Council will be held in John Ware Hall, Boston Medical Library, 8 The Fenway, Wednesday, February 2, 1927, at 11:30 o'clock, A. M.

BUSINESS

1. Minutes of last meeting in abstract.
2. Report of Committee of Arrangements.
3. Report of Committee on Membership and Finance. On Membership.
4. Report of committee to consider petitions for restoration to privileges of fellowship.
5. Appointment of three delegates and three alternates to House of Delegates, American Medical Association; also two delegates each to the annual meetings of the medical societies of the New England States; also a delegate to the Annual Congress on Medical Education, Medical Licensure and Hospitals, at Chicago, February 14-16, 1927.
6. Report of the Treasurer and Auditing Committee.
7. Report of Committee on Membership and Finance. On Finance, with Budget for 1927.
8. Report of Committee on State and National Legislation.
9. Report of Committee of Nine.
10. Report Upon New England Medical Council.
11. Report of Committee on Medical Education and Medical Diplomas.
12. Incidental business.

WALTER L. BURRAGE, *Secretary*.

Brookline, January 26, 1927.

Councillors are reminded to sign one of the attendance books before the meeting.

In order to avoid misunderstanding, The managing Editor of the JOURNAL would like to call the attention of members to the fact that Treasurers of the District Societies have sent out notices of the annual dues assessed by the Massachusetts Medical Society. New members, and occasionally others, may fail to understand that it is a requirement of the Society that sending the JOURNAL to those who have failed to pay their dues be omitted after March 1.

There is another very important reason for prompt payment of dues. The District Treasurers have a certain proportion of the amount collected before March 1 returned to the District Society, and every District Society can use this refund to good advantage in carrying on its own activities. Every member ought to recognize the importance of sustaining the work of the district through prompt payment of the annual dues.

LEGISLATIVE NOTES

AN ACT RELATIVE TO REIMBURSEMENT TO CITIES AND TOWNS FOR CARE OF PERSONS ILL WITH TUBERCULOSIS

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Section eighteen of chapter one hundred and twenty-two of the General Laws, as amended by section eight of chapter two hundred and forty-one of the acts of nineteen hundred and twenty-six, is hereby further amended by adding at the end thereof the following new paragraph:—

In cases of tuberculosis such allowance shall be exclusive of the subsidy received from the commonwealth under section seventy-six of chapter one hundred and eleven.

SECTION 2. Section seventy-six of chapter one hundred and eleven of the General Laws, as amended by chapter two hundred and eighty-four of the acts of nineteen hundred and twenty-six, is hereby further amended by striking out, in the first line, the words "placing its" and inserting in place thereof the word:—supporting,—and by striking out, in the seventh line, the words "who has a legal settlement therein," so as to read as follows:—Section 76. Every town supporting patients suffering from tuberculosis in a county, municipal or incorporated tuberculosis hospital in the commonwealth, or in a building or ward set apart for such patients by a county, municipal or incorporated hospital therein, shall be entitled to receive from the commonwealth a subsidy of five dollars a week for each patient provided that such patient is unable to pay for his support, and that his kindred bound by law to maintain him are unable to pay for the same; but a town shall not become entitled to this subsidy unless, upon examination authorized by the department, the sputum of such patient be found to contain bacilli of tuberculosis, nor unless the hospital building or ward be approved by it, and it shall not give such approval unless it has by authority of law, or by permission of the hospital, full authority to inspect the same at all times. The department may at any time withdraw its approval. In the case of hospitals having a bed capacity which, in the opinion of the department, is in excess of the number of beds needed for the localities which these institutions serve for patients exhibiting tubercle bacilli in their sputum, the subsidy above provided shall be allowed for such patients not exhibiting tubercle bacilli in their sputum as, in the joint opinion of the superintendent or medical director of the institution and of a member of the

department designated by the commissioner, are bona fide cases of pulmonary tuberculosis and have been in the institution more than thirty days.

SECTION 3. Section eighty-eight of said chapter one hundred and eleven is hereby amended by inserting after the word "hospitals" in the second line the words:—or through application by the department,—and by inserting after the word "hospital" in the fourteenth line the words:—or, if admitted through application by the department, by the town from which the patient was admitted,—and by inserting after the word "inclusive" in the twenty-fifth line the words:—except state institutions,—so as to read as follows:—**Section 88.** Patients shall be admitted to the said hospitals through application by the boards of health of the towns served by the hospitals or through application by the department. The charges for the support of patients shall be based on the actual cost of their care and treatment, exclusive of all interest or other expenses pertaining to the construction, equipment or permanent upkeep of the institution. Patients paying for their care in whole or in part, or for whom such payment in whole or in part is made by others, may be admitted on terms fixed by the trustees; but all patients shall be admitted in the order of their application, and no preference shall be given to paying patients over others. The charge for the support of a patient in any hospital established under sections seventy-eight to ninety, inclusive, so far as the same or any part thereof is not paid by the patient or in his behalf, as aforesaid, shall be paid by the town sending him to the hospital, or, if admitted through application by the department, by the town from which the patient was admitted. If the patient has no known settlement in the commonwealth the charge shall be paid by it, upon the approval of the bills by the department of public welfare, in the manner provided by section one hundred and sixteen. Such charges may afterward be recovered by the town or by the state treasurer, as the case may be, from the patient, if he is able to pay, or from any person or kindred bound by law to maintain him, in the manner provided by section sixty-six, for the recovery of unpaid charges for the support of inmates of the state sanatoria. All towns paying for the support of patients an amount exceeding fifty per cent of the actual cost of maintaining them in hospitals erected, or utilized by contract, under sections seventy-eight to ninety, inclusive, except state institutions shall be entitled to any payment or repayments in like manner and subject to like conditions applicable to the support of tubercular patients in a town tuberculosis hospital.

HOUSE 11 requires physicians managing or

superintending a hospital, sanitarium or other institution to report every case of bullet wound, gun shot wound, powder burn or any other injury arising from or caused by the discharge of a gun, pistol or other firearm, with a penalty for failure to report. Hearing scheduled for January 24.

HOUSE 75 provides that Boards of Health of cities and towns may annually grant permits to persons to operate camps for profit or charitable or other purposes designed or intended as recreation, health or tourists camps and fix fees for such permits.

Special rules are provided for the management of such camps. The bill does not apply to private camps or to camps operated in accordance with section 62A to 62H inclusive.

HOUSE 71 reads as follows: Begin with ("An Act relative to").

HOUSE 225 provides that no person, co-partnership or corporation shall at retail sell, barter or exchange or receive, hold, pack or display, or offer for sale, barter, or exchange in the commonwealth any dangerous caustic or corrosive substance in a retail parcel, package or container, designed for household use, unless there is affixed a conspicuous, easily legible label or sticker containing the name of the article, the manufacturer, the word "Poison," and directions for treatment in case of accidental personal injury. The substances contained in this bill are: hydrochloric acid in a concentration of 10%; sulphuric acid in a concentration of 10%; nitric acid in a concentration of 5%; carbolic acid in a concentration of 5%; oxalic acid in a concentration of 10%; acetic acid in a concentration of 20%; hypochlorous acid in a concentration of 10%; potassium hydroxide including caustic potash and Vienna paste in a concentration of 10%; sodium hydroxide including caustic soda and lye in a concentration of 10%; silver nitrate in a concentration of 5%; ammonia water in a concentration of 5%. This bill for some unknown reason was defeated last year and is again presented as a most important measure in preventing serious accidents. The hearing will be January 24.

HOUSE 259 contains an amendment of the law prohibiting the sale of unwholesome food. (Petition of the Mayor of Boston.)

HOUSE 73 amendment to Chapter 94 of the General Laws provides that no person shall maintain an establishment for the pasteurization of milk without a license from the board of health of the town where such establishment is located.

The Department of Public Health may make rules and regulations for the enforcement of this section.

HOUSE 76. This bill seems to authorize the purchase of Radium for the treatment of cancer

This radium will be used at The Norfolk State Hospital. The sum of one hundred and twenty thousand dollars is named in the bill for the purchase of radium.

Further provisions are incorporated in the bill which would permit loaning the radium to approved institutions. The hearing was held January 19.

MISCELLANY

THE DEPARTMENT OF COMMERCE STATISTICS WITH RESPECT TO AUTOMOBILE FATALITIES

NUMBER OF AUTOMOBILE FATALITIES, JANUARY 3, 1926 TO JANUARY 1, 1927

The Department of Commerce announces, that during the four weeks ending January 1, 1927, automobile accidents were responsible for 521 deaths in 78 large cities of the United States. The majority of these deaths were the result of accidents which occurred within the corporate limits of the city, although some accidents occurred outside of the city limits. This number (521) compares with 551 deaths during the four weeks ending January 2, 1926.

Considering simply the number of deaths by four week periods since May, 1925, the lowest total (350) appears for the four week period ending March 27, 1926, and the highest (676) for the four week period ending November 6, 1926. The numbers in the 22 periods of four weeks were as follows:

FOUR WEEKS ENDING:

January 1, 1927.....	521	February 27, 1926....	378
December 4, 1926.....	534	January 30, 1926.....	434
November 6, 1926.....	676	January 2, 1926.....	551
October 9, 1926.....	656	December 5, 1925.....	625
September 11, 1926....	560	November 7, 1925.....	612
August 14, 1926.....	497	October 10, 1925.....	629
July 17, 1926.....	484	September 12, 1925...	531
June 19, 1926.....	549	August 15, 1925.....	469
May 22, 1926.....	487	July 18, 1925.....	495
April 24, 1926.....	424	June 20, 1925.....	492
March 27, 1926.....	350	May 23, 1925.....	424

Six cities reported no automobile fatalities for the last four weeks, while four cities reported no automobile fatalities for the corresponding period of 1925.

TESTIMONIAL TO DOCTOR DOWNING*

WARM felicitations and greetings are extended to Augustus S. Downing, New York State Department of Education, by the Representatives of the Learned Professions of his completion of his fifty-second year of service in their behalf.

Sentiments of admiration, esteem and appreciation are shared by all herewith assembled to do honor to

*Presented at the testimonial dinner, December 9, 1926.

OUR LEADER

Amid such feelings of confidence it may not be presumptuous to assure you that the fields over which you have ploughed and planted ideals of the highest character may yield a crop of men and women whose lives will ever be devoted to the service of their fellow men: the ripening harvest producing better health, better living conditions, and greater opportunities for all. The laborers are not few and they will continue to look to you for inspiration and leading. They would have you feel that they are ready and willing to coöperate with you in every good work.

As an earnest of their love and esteem, they ask you to accept this testimonial which is graciously presented with the heart-felt wish that your life may be long spared, your health good, and all your efforts most fruitful.

In behalf of the assembled professions.

Orrin Sage Wightman

HEALTH SERVICE GIVES WARNING TO PREVENT SPREAD OF INFLUENZA

REPORTS of the epidemic prevalence of influenza in Europe, particularly in Spain, have been received at the United States Public Health Service, it was announced orally January 6, and has caused Public Health officials to caution the American populace against taking any undue chances with colds, which readily develop into influenza.

It was recalled by officials of the Public Health Service that the great pandemic of influenza of 1918, spreading over the entire world and causing upward of 18,000,000 deaths, had its inception in Spain, as is the case in the present epidemic. The epidemic was introduced in the United States at Boston, according to Public Health Service records, when a part of the American Expeditionary forces were landed at that port.

After introduction of influenza in the United States in 1918, it spread rapidly and during that winter took a toll of one-half million lives, it was stated. From Spain, the disease spread to England, India, Germany and France. In India alone the epidemic caused a total of 12,000,000 deaths.

EPIDEMICS IN YEAR 1920

It was also recalled by Public Health officials, that in 1920 an epidemic of influenza caused 100,000 fatalities in the United States. This epidemic, however, was not so widespread as that of 1918, which reached to virtually all sections of the world.

Up to the present time, it was stated by Public Health officials, there is no immediate danger of an epidemic of influenza in the United

States. Steps are being taken, however, to check any possible abnormal prevalence if possible. A discouraging factor, it was stated, is that once influenza gets a foothold, there is no practical way of checking its transmission, as it is conveyed through personal contact, and by just merely inhaling the germs from an infected person.

Health reports from all over the United States are being scanned daily by the Public Health Service to ascertain if there is any abnormal presence of influenza. Although no marked appearance of the disease has as yet been discovered, the Public Health Service, none the less, is keeping in close touch with the situation.—*U. S. Daily*.

DR. STURGIS NAMED TO MICHIGAN POST

DR. CYRUS C. STURGIS of Harvard University has been named by the University of Michigan board of regents as director of the new Simpson Memorial Institute, which will be devoted exclusively to the study of pernicious anemia.

Dr. Cyrus C. Sturgis, who has been appointed professor of internal medicine and director of the new Simpson Memorial Institute at the University of Michigan is assistant professor of medicine at Harvard University and an associate at the Peter Bent Brigham Hospital. He will sever these connections before leaving for Ann Arbor to take up his new duties on July 1.

Dr. Sturgis has been connected with Harvard since 1919. He received his B.S. degree from the University of Washington at Seattle in 1913 and his M.D. degree from Johns Hopkins University in 1917. He was an interne at the Peter Bent Brigham Hospital in 1917 before joining the army as a medical officer.

The Simpson Memorial Institute, of which he will be director, was founded under the terms of the will of a Mrs. Simpson of Detroit, who left approximately \$400,000 to the study of pernicious anemia, of which her husband died. The new building has been constructed adjacent to the university hospital at Ann Arbor, and will be operated as part of the hospital. Dr. Sturgis also will be on the medical faculty of the university.—*Boston Herald*

TYPHOID CARRIERS SUBJECT OF BILL

DR. GEORGE H. BIGELOW, state commissioner of public health, has announced that as the result of recent typhoid fever outbreaks he will recommend a bill to the present Legislature to control employment of persons who are typhoid carriers, and bar them from any occupation

where they have to handle food or food products.

The health department, under the proposed bill, would be authorized to establish rules and regulations which would be enforced by the local boards of health. It is provided that there will be a fine of \$50 or a jail imprisonment of a month or more for a violation of the regulations.

It is further provided that any company employing a person found to be a typhoid carrier will be subject to a fine of \$100 or more.

COMMUNICABLE DISEASES IN 1926

INCREASES, as compared with last year, in the incidence of diphtheria, measles, scarlet fever and smallpox were reported by State health officers for the week ended December 4, the Public Health Service announced in its regular weekly survey of communicable diseases made public December 23.

State health officers also report decreases in the prevalence of typhoid fever, poliomyelitis, and deaths resulting from influenza and pneumonia.

A total of 4,038 cases of scarlet fever were reported in 41 States for the surveyed week of this year, whereas for the corresponding week of 1925 3,704 cases were reported by the same States. Reports from 100 cities disclosed 1,392 cases for the 1926 week and 1,199 cases for that of 1925. The estimated expectancy was 1,031 cases.

STATUS OF DISEASES

A resumé of the status of communicable diseases is as follows:

Diphtheria.—For the week ended December 4, 1926, 41 States reported 2,525 cases of diphtheria. For the week ended December 5, 1925, the same States reported 2,295 cases of this disease.

One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,000,000, reported 1,299 cases of diphtheria for the week ended December 4, 1926. Last year for the corresponding week they reported 942 cases.

The estimated expectancy for these cities was 1,376 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-eight States reported 5,178 cases of measles for the week ended December 4, 1926, and 4,443 cases of this disease for the week ended December 5, 1925. One hundred cities reported 1,021 cases of measles for the week this year, and 1,963 cases last year.

Poliomyelitis.—The health officers of 42 States reported 34 cases of poliomyelitis for the week ended December 4, 1926. The same States

reported 37 cases for the week ended December 5, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Forty-one States—this year, 4,038 cases; last year, 3,704 cases; 100 cities—this year, 1,392 cases; last year, 1,199 cases; estimated expectancy, 1,031 cases.

INCREASE IN SMALLPOX

Smallpox.—For the week ended December 4, 1926, 41 States reported 612 cases of smallpox. Last year for the corresponding week they reported 433 cases. One hundred cities reported smallpox for the week as follows: 1926, 83 cases; 1925, 73 cases; estimated expectancy, 85 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid Fever.—Five hundred and thirty-seven cases of typhoid fever were reported for the week ended December 4, 1926, by 41 States. For the corresponding week of 1925 the same States reported 667 cases of this disease. One hundred cities reported 60 cases of typhoid fever for the week this year and 110 cases for the corresponding week last year.—*U. S. Daily.*

RECENT DEATHS

BROWN—DR. FREDERICK AUGUSTUS BROWN, a graduate of the Medical Department of the University of Pennsylvania in 1882, died at his home in Dedham, January 14, 1927. Dr. Brown practiced formerly in Webster. He was 70 years of age, and had not been in practice for some time.

MACKENZIE—DR. FREEMAN ALEXANDER MACKENZIE, a graduate of Harvard Medical School in the class of 1883, was struck by a motor car at the corner of Massachusetts Avenue and Tremont Street, Boston, January 1, 1927. He had a fractured skull and died at the City Hospital without regaining consciousness. He was 70 years of age and had been retired for some years.

BROUGHTON—DR. HENRY WHITE BROUGHTON of Jamaica Plain died at his home, January 15, 1927, after an illness of ten months with heart disease.

Dr. Broughton was a native of Boston, born October 10, 1851. His parents were Nicholson and Susan Aravesta (White) Broughton. He was graduated from Harvard with the class of 1875, and from the Harvard Medical School in 1879. He was house officer at the Boston City Hospital during 1878 and 1879, and thereafter he established himself in Jamaica Plain, where he was visiting physician to the Faulkner Hospital.

In his early practice he was physician to the Boston Dispensary, the Massachusetts Infant Asylum and to the Massachusetts Kindergarten for the Blind. He wrote many articles for the medical press, some of them in conjunction with E. H. Bradford, R. W. Lovett, E. W. Dwight, A. L. Mason, J. T. Bottomley, J. B. Blake and others. In his later practice he had a large clientele among older patients and was much beloved by them.

He was a member of the American Medical Association, the Massachusetts Medical Society and the Boston Medical Library. He was a member of the Harvard Club of Boston and the Elliot Club of Jamaica Plain.

Dr. Broughton's first wife was Jennie S. Folsom, who came of an old Jamaica Plain family. She died in 1913. For his second wife he married Miss Mary Leavitt, daughter of Judge Leavitt of Exeter, N. H. She survives him, as do two sons, John N. Broughton, living in Waban, and Philip F. Broughton of New York. A brother, Dr. Arthur N. Broughton, is the well known Jamaica Plain physician, and a sister is Mrs. Richard B. Grover of Petersham. Another son, Henry W. Broughton, Jr., was killed in the World War.

WRIGHT—DR. MARY WRIGHT, chief of staff of the New England Hospital for Women and Children, Roxbury, visiting physician to out-patients in the diseases of children at the Massachusetts General Hospital, died of septicaemia following carbuncle of the lip, at the New England Hospital for Women and Children, January 13, 1927, following a two weeks' illness.

She was a native of Great Barrington, the daughter of the late Frank H. and Frances Higgins Wright, where she was born in 1839. After graduating from Vassar College in 1911 she entered the Medical Department of the Johns Hopkins University, Baltimore, and received her M.D. in 1917. She practiced in Connecticut and came to Boston in 1921, when she joined the Massachusetts Medical Society. She was a Fellow of the American Medical Association and a member of the New England Pediatric Society.

Dr. Wright is survived by a brother and a sister and by her step-mother, Mrs. Florence S. Wright of Newton Center, with whom she made her home.

DEXTER—DR. FRANKLIN DEXTER, formerly associate professor of anatomy in Harvard Medical School, died at his home in Boston, after an illness of several months, January 18, 1927, at the age of 69.

The son of the late Franklin Gordon Dexter and Harriet Appleton Dexter, he was born in Boston, May 10, 1857. He took his M.D. at the College of Physicians and Surgeons, Columbia University, New York, in 1887, and then spent four years studying medicine in Vienna. On his return he lived a year in New York, and, coming to Boston, was appointed demonstrator of histology in Harvard Medical School. Next year (1893) he was made demonstrator of anatomy, in 1895 assistant professor in that subject, and in 1900 associate professor of anatomy. He served the school as director of scholarships from 1910 to 1922, part of this term also acting in the same capacity for the Dental School.

He wrote a treatise on the anatomy of the peritoneum that was highly thought of. He was a member of the American Association of Anatomists, of the Massachusetts Medical Society, and of several social clubs.

Dr. Dexter is survived by his widow, who was Miss Jane Dwight, and by a son and daughter.

OBITUARY

GEORGE HAYWARD BINNEY

GEORGE HAYWARD BINNEY, a practising surgeon of Boston, died of bronchial pneumonia on December 14, 1926, at the age of 41 years. He was born in Boston, January 20, 1886, the only son of the late George H. Binney and Edith Marsh Binney.

His early training was received at Noble and Greenough School, then at Harvard where he received his A.B. degree with the class of 1908. He received his degree of Doctor of Medicine at

the Harvard Medical School with the class of 1912. After leaving the Medical School, he served an internship at the Massachusetts General Hospital on the Surgical side and following that was an obstetrician for the Boston Visiting Nursing Association, giving his services particularly in East Boston and Charlestown.

For the past ten years, Dr. Binney has been a Surgeon at the Boston Dispensary and for three years has been an Assistant in Clinical Surgery at the Harvard Medical School.

When the war broke out, Dr. Binney volunteered and served as a 1st Lieutenant in the Medical Corps where his surgical skill was appreciated.

Dr. Binney was not a club man, only belonging to the Harvard Club of Boston, for he enjoyed spending his free time at home with his family or in his studio where he did excellent sculpturing.

He is survived by his mother and his wife, Susan Appleton Binney, who is the daughter of Dr. William Appleton of Boston, and six children, Georgette 13, Susan A. 12, Esther 10, William A. 9, Robert H. 8, and Marshall W. 6.

Dr. Binney was always prompt in answering any call where he could be of service even though the call came when he was starting for sail or in the middle of a cold night.

His service to the community can be best described by the three words, reliability, geniality and skill. Through his death his family has lost a needed counselor, his associates a faithful friend and the Boston Dispensary a skillful surgeon.

CORRESPONDENCE

THE PRIORITY OF HOLMES' ESSAY ON PUERPERAL FEVER

Columbus, Ohio, January 11, 1927.

Editor, Boston Medical and Surgical Journal:

In your issue of December 16, 1926, there was a communication from Dr. C. E. DeWitt of Wolfville, N. S., in which he states that Oliver Wendell Holmes, after returning from a trip to Europe and apparently after discussion of the subject with Dr. Semmelweis, announced the contagiousness of puerperal fever.

My own recollection had always been that Dr. Holmes published his vigorous article on the subject of the contagiousness of puerperal fever in 1843, and was the first to make a distinct and positive pronouncement on that subject. In 1846 Dr. Semmelweis was appointed assistant obstetrician to a Vienna lying-in hospital, and promptly noticed the vast difference in morbidity and mortality in lying-in wards attended respectively by midwives and medical students. He at once required medical students to wash their hands in chlorin water before examining women in labor, the result being that the mortality of the two divisions rapidly approached each other, showing very conclusively that the disease had been carried to the lying-in women by the unclean hands of the students. I do not have at hand data to determine the date of his publication of his conclusions, but it must certainly have been several years after

the publication by Dr. Holmes. Certainly in his original publication, or in some of his later discussions when he was so viciously attacked by Hodges and Meigs of Philadelphia, Dr. Holmes would have called attention to the work of Semmelweis, had he had any knowledge of the latter's ideas. Garrison ("History of Medicine," 1922) states that Holmes antedated Semmelweis "by five years."

With the data which you certainly have at hand in Boston, it seems to me that the facts could be readily ascertained and due credit given to the one to whom priority is due.

Very truly yours,
J. F. BALDWIN.

EDITORIAL NOTE:—Dr. Holmes' paper was read February 13, 1843, before the Boston Society for Medical Improvement.

In 1855 Dr. Holmes again wrote on the subject under the title "Puerperal Fever as a Private Pestilence," and referred to Semmelweis, a pupil of Skoda and Rokitsansky, who in 1846 had been an assistant in the first obstetric ward of the Allgemeines Krankenhaus in Vienna. In 1847 Kolletschka died of a dissection wound and Semmelweis witnessed the autopsy. The pathological appearances seemed to be identical with those observed in women who had died of puerperal sepsis. Although Holmes had a clear conception of the communicability of sepsis, Semmelweis was the first to use antiseptic measures by means of calcium chloride. His paper under title of "The Cancer Concept and Prophylaxis of Puerperal Fever" was published in 1861. Semmelweis was derided and persecuted, finally becoming insane, and died in 1865. (Data taken from Third Edition published by Garrison in 1922.)

INFORMATION REGARDING HOMOSEXUALITY SOLICITED

January 14, 1927.

Editor, Boston Medical and Surgical Journal:

We are making a study of homosexuality in relation to the theories of introversion-extroversion. It is at best a slow process to secure data. We should like to get in touch with your readers who may be able to secure data from homosexuals through the use of a rating scale of emotional outlets. The rating scale may be filled in by the homosexual himself or by a third person who knows him fairly well. At most, not more than a half-hour is needed to make the emotional ratings.

We should appreciate your cooperation in calling this to the attention of the readers of your JOURNAL.

Sincerely yours,

DONALD A. LAIRD, *Director*,
Psychological Laboratory, Colgate University,
Hamilton, N. Y.

RESUME OF COMMUNICABLE DISEASES REPORTED IN MASSACHUSETTS FOR DECEMBER, 1926

GENERAL PREVALENCE

The common communicable diseases which showed an increase over last month were chickenpox, diphtheria, measles, mumps, lobar pneumonia and scarlet fever.

	Dec., 1926	Nov., 1926	Dec., 1925
Chickenpox	1,718	1,232	1,103
Diphtheria	505	418	390
Measles	358	161	5,582
Mumps	810	599	197
Pneumonia, lobar	410	265	715
Scarlet fever	1,539	1,191	988

RARE DISEASES

Anterior poliomyelitis was reported from Boston, 2; Haverhill, 1; Lowell, 1; Melrose, 2; Plymouth, 1; Watertown, 1; total, 8.

Anthrax was reported from Lynn, 2.

Dog-bite requiring anti-rabic treatment was reported from Boston, 19; Cambridge, 6; Danvers, 1; Everett, 1; Lowell, 5; Newton, 1; Peabody, 3; Revere, 1; Salem, 1; Somerville, 1; Springfield, 3; total, 42.

Encephalitis lethargica was reported from Boston, 1; Framingham, 1; Watertown, 1; total, 3.

Epidemic cerebrospinal meningitis was reported from Boston, 4; Brockton, 1; Fall River, 1; Lawrence, 1; Lynn, 2; Malden, 1; Melrose, 1; Pittsfield, 2; Westboro, 1; Westfield, 1; total, 15.

Septic sore throat was reported from Beverly, 1; Boston, 11; Cambridge, 1; Fall River, 1; Holyoke, 1; Rehoboth, 2; Somerville, 1; total, 18.

Tetanus was reported from New Bedford, 1; Peabody, 1; total, 2.

Trachoma was reported from Boston, 2; Chelsea, 1; Lynn, 1; total, 4.

Trichinosis was reported from Cohasset, 1.

DISTRIBUTION

All Communicable Diseases

	Dec., 1926	Dec., 1925
Total cases (all causes)	7,318	11,603
Case rate per 100,000 population	173.5	279.0

Certain Prevalent Diseases

	Dec., 1926	Dec., 1925
<i>Diphtheria</i>	1926	1925
Total cases	505	390
Case rate per 100,000 population	11.9	9.3

Cases in cities and towns that have noticeably exceeded their median endemic indices*:

Revere	19	Salem	25
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	Dec., 1926	Dec., 1925
<i>Measles</i>	1926	1925
Total cases	358	5,583
Case rate per 100,000 population	8.4	134.2

Cases in cities and towns that have noticeably exceeded their median endemic indices*:

Franklin	77	Pittsfield	83
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	Dec., 1926	Dec., 1925
<i>Scarlet Fever</i>	1926	1925
Total cases	1,539	988
Case rate per 100,000 population	36.4	23.7

Cases in cities and towns that have noticeably exceeded their median endemic indices*:

Attleboro	24	Somerville	98
Lexington	23	Watertown	32
Lynn	110	Westboro	16
Pittsfield	115	Winthrop	27

	Dec., 1926	Dec., 1925
<i>Tuberculosis, Pulmonary</i>	1926	1925
Total cases	394	372
Case rate per 100,000 population	9.3	8.9

	Dec., 1926	Dec., 1925
<i>Tuberculosis, Other Forms</i>	1926	1925
Total cases	66	60
Case rate per 100,000 population	1.5	1.4

	Dec., 1926	Dec., 1925
<i>Typhoid Fever</i>	1926	1925
Total cases	94	34
Case rate per 100,000 population	2.2	.8

Cases in cities and towns that have noticeably exceeded their median endemic indices*:

Boston	28	Lincoln	26
Concord	15	Weston	3

	Dec., 1926	Dec., 1925
<i>Whooping Cough</i>	1926	1925
Total cases	604	1,063
Case rate per 100,000 population	14.3	25.5

*The median endemic index is obtained by arranging in arithmetical sequence the monthly totals of reported cases for the past five years and selecting the middle figure.

CASES REPORTED TO THE MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH FOR THE WEEK ENDING JANUARY 8, 1927

Anterior poliomyelitis	2	Ophthalmia neonatorum	49
Chickenpox	515	Pneumonia, lobar	160
Diphtheria	131	Scarlet fever	515
Dog-bite requiring anti-rabic treatment	11	Septic sore throat	5
Encephalitis lethargica	1	Suppurative conjunctivitis	9
Epidemic cerebrospinal meningitis	2	Syphilis	77
German measles	18	Trachoma	1
Gonorrhea	168	Tuberculosis, pulmonary	95
Influenza	15	Tuberculosis, other forms	18
Measles	176	Tuberculosis, hilum	4
Mumps	284	Typhoid fever	12
		Whooping cough	149

WEEK ENDING JANUARY 15, 1927

Actinomycosis	1	Ophthalmia neonatorum	35
Anterior poliomyelitis	2	Pellagra	1
Anthrax	1	Pneumonia, lobar	178
Chickenpox	425	Scarlet fever	495
Diphtheria	109	Septic sore throat	3
Dog-bite requiring anti-rabic treatment	3	Suppurative conjunctivitis	5
Encephalitis lethargica	2	Syphilis	50
Epidemic cerebrospinal meningitis	1	Tetanus	1
German measles	13	Trachoma	2
Gonorrhea	101	Tuberculosis, pulmonary	104
Influenza	12	Tuberculosis, other forms	25
Measles	197	Tuberculosis, hilum	11
Mumps	357	Typhoid fever	12
		Whooping cough	141

CONNECTICUT DEPARTMENT OF HEALTH

MORBIDITY REPORT FOR THE WEEK ENDING JANUARY 8, 1927

Diphtheria	34	Chickenpox	135
Last week	34	Encephalitis, epidemic	3
Diphtheria bacilli carriers	32	German measles	3
Scarlet fever	93	Influenza	12
Last week	82	Mumps	27
Typhoid fever	3	Paratyphoid fever	1
Last week	5	Pneumonia, lobar	58
Measles	26	Septic sore throat	3
Last week	28	Tuberculosis, pulmonary	30
Whooping cough	62	Tuberculosis, other forms	1
Last week	47	Gonorrhea	20
Bronchopneumonia	44	Syphilis	20
Cerebrospinal meningitis	1		

MORBIDITY REPORT FOR THE WEEK ENDING
JANUARY 15, 1927

Diphtheria	31	Chickenpox	136
Last week	34	German measles	5
Diphtheria bacilli carriers	2	Influenza	24
Scarlet fever	101	Mumps	49
Last week	93	Pneumonia, lobar	32
Typhoid fever	1	Septic sore throat	4
Last week	3	Trachoma	1
Measles	17	Tuberculosis, pulmonary	31
Last week	26	Tuberculosis, other forms	2
Whooping cough	47	Gonorrhea	63
Last week	62	Syphilis	27
Bronchopneumonia	34		
Cerebrospinal meningitis	2		

NEWS ITEMS

HONORS TO DR. L. E. PHANEUF—Dr. Louis E. Phaneuf has recently been elected associate member of the Obstetrical and Gynecological Society of Paris and honorary member of the Gynecological and Obstetrical Society of Belgium.

FELLOWSHIPS IN PSYCHIATRY

Fellowships for training in extramural psychiatry are again available to a limited number of qualified applicants, announces the National Committee for Mental Hygiene, in a recent statement. These fellowships are made possible by a renewal, from the Rockefeller Foundation, for a second period of three years, of its appropriation of \$40,000 to the National Committee for Mental Hygiene, which administers the fund and directs the training of fellows.

These fellowships are designed to provide special training for physicians who have had previous hospital training in psychiatry, but who wish to prepare themselves for extramural work in child guidance, delinquency, education, dependency and industry.

Fellowships are open to physicians under 35 years of age, who are graduates of Grade A medical schools and have had at least one year of training in a hospital for mental disease, maintaining satisfactory standards of clinical work and instruction. A longer period of mental hospital training is desirable.

A different type of fellowship is also available for the training of social workers in psychiatric social work. Applicants for fellowships in psychiatric social work must hold a collegiate degree, be under 30 years of age and be free to devote themselves to a period of professional work upon completion of their training.

Applications for either type of fellowship are now being received at the National Committee for Mental Hygiene. Blanks for this purpose may be obtained by addressing Dr. Frankwood E. Williams, 370 Seventh Avenue, New York City.

TRUDEAU MEDAL AWARDED

At the annual meeting of the National Tuberculosis Association held in Washington, the Trudeau medal for 1926 was awarded to Dr. Theobald Smith. The plan is to present the medal at each annual meeting to the individual who, in the judgment of the association, has made the most meritorious contribution on the cause, prevention or treatment of tuberculosis during the previous year. The medal, known as the Trudeau Medal of the National Tuberculosis Association, was presented by Dr. Edward R. Baldwin, chairman of the committee, and was accepted in a gracious speech by Dr. Smith. Dr. Smith was the first person to distinguish between the bovine and the human bacillus of tuberculosis. This was in 1896.

Since that date Dr. Smith has been a leader in research on tuberculosis and other diseases.

"It was Theobald Smith who made mankind turn a corner. He was the first and remains the captain of American microbe hunters. . . . He showed men an entirely new and fantastic way disease may be carried . . . by an insect."—*Bulletin of the City of Chicago*.

Dr. Charles L. Connor, instructor in pathology at the Harvard Medical School, has been given a leave of absence in order that he may accept a temporary position as associate professor of pathology at McGill University.—*Science*.

NOTICES

At the annual meeting of the Trustees of the Burbank Hospital, held January 17, 1927, James J. Regan, M.D., was unanimously elected a Non-resident Consulting Oculist for the ensuing year.

HARVARD PUBLIC HEALTH SCHOOL
ANNOUNCEMENT

DURING the school month of February, there will be offered, under the direction of Dr. Joseph B. Howland, Superintendent of the Peter Bent Brigham Hospital, a course in Hospital Administration at the Harvard School of Public Health.

The course is designed as a demonstration course for public health officers, hospital trustees, and others who have connections with hospitals, and is intended to familiarize the student with the principles of construction, organization, and administration of hospitals and allied institutions.

There will be visits to hospitals in and about Boston, covering a series of typical institutions, such as general, chronic, psychopathic, tuberculosis, contagious diseases, and children's hospitals. Lectures by various authorities will be given on appropriate subjects such as Construction and Organization, Accounting, Principles of Hospital Heating, Lighting and Ventilating, Sterilizing and Laundry Methods, Hospital Records, etc. Each week there will be a Round Table Conference reviewing the work of the week. During the latter part of the course, students will be assigned to the departments of selected general hospitals for observation of methods.

The fee for the course will be \$50. Admission is based upon the consent of the Administrative Board of the School and of the Director of the Course, and is limited to members of the Medical Profession, and to Public Health Students.

For application blanks and further information, apply to The Secretary, Harvard School of Public Health, 55 Van Dyke St., Boston, Mass.

WORCESTER DISTRICT AFFAIRS

DR. RAY W. GREENE has been elected to the Board of Trustees of the Worcester City Hospital to fill the vacancy caused by the resignation of the Hon. Peter Holmes. Dr. Greene has been a practicing physician of Worcester for forty years and has been a visiting and consulting physician to the Hospital for the past thirty years. He is the first member of the medical profession to be elected to the Board for a number of years. Dr. Greene is a member of the Worcester District and a counselor from this district to the Mass. Medical Society.

FUTURE PROGRAM OF THE WORCESTER DISTRICT

Feb. 9, 1927—Chamber of Commerce Foyer. Speaker: Dr. Bloodgood.

March 9, 1927—Memorial Hospital. Speaker: To be announced.

April 13, 1927—Grafton State Hospital. Speaker: To be announced.

May 11, 1927—Annual meeting at the Worcester Country Club.

The January meeting of the Worcester District Medical Society was held in the Foyer of the Chamber of Commerce Building on January 12, 1927. President Trowbridge presided over a short business meeting at six thirty o'clock which was followed by a reception to Dr. John Osborne Polak of New York, the guest of the evening. At seven o'clock dinner was served at the Hotel Bancroft.

About seventy-five members sat down to this dinner. Following the dinner, Dr. Trowbridge introduced Dr. Polak as the speaker of the evening. Dr. Polak is Obstetrician and Gynecologist at the Long Island College Hospital of Brooklyn, N. Y. His topic was "The Pathology and Management of Pelvic Inflammations in General Practice." Dr. Polak covered the different types of pelvic infections as to diagnosis and treatment from vagina to fundus. He laid considerable stress on conservative treatment until the infection became absolutely localized and walled off. His conservative treatment consisted of elevation of bed, blood transfusions, supportive diet and medicines, and fresh air. Surgery is not indicated until a localized abscess has formed. In the last few minutes of his talk, Dr. Polak briefly explained the technique of the low Caesarian section. The entire talk was illustrated by lantern slides which made his subject doubly interesting. Seldom has this Society heard a more instructive and convincing talk then Dr. Polak gave us. Dr. Ernest L. Hunt led the discussion of Dr. Polak's paper. The meeting was adjourned at 9:30 o'clock.

EARL E. FIPPEN.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Assistant Medical Officer
Associate Medical Officer
Medical Officer
Senior Medical Officer

Applications will be rated as received by the United States Civil Service Commission at Washington, until June 30, 1927.

There is especial need for medical officers qualified in tuberculosis or neuropsychiatry, for duty at hospitals of the Veterans' Bureau. There are a number of vacancies in positions in the Indian Service which call for training in general medicine and surgery. In addition, there is opportunity for appointment of specialists in practically all branches of the profession.

In addition to the Veterans' Bureau and the Indian Service, appointments from these examinations will be made to the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Departmental Service at Washington, and other branches.

The demand for specialized medical officers in the Federal service is constant and the supply of eligibles is rarely equal to the demand.

Applicants will not be required to report for written scholastic tests, but will be rated on their education and training, and their practical experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house in any city.

APPLICATIONS WILL BE RATED AS RECEIVED AT WASHINGTON, D. C., UNTIL JUNE 30, 1927

Assistant Medical Officer
Associate Medical Officer
Medical Officer
Senior Medical Officer

The United States Civil Service Commission announces open competitive examinations under the above titles for filling vacancies occurring in the Federal classified civil service throughout the United States, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion.

There is especial need for medical officers qualified in tuberculosis or neuropsychiatry.

Salary and Promotion, Departmental Service—The entrance salaries for these positions in the Departmental Service, Washington, D. C., are: Assistant medical officer, \$2,400 a year; associate medical officer, \$3,000 a year; medical officer, \$3,500 a year; senior medical officer, \$5,200 a year. A probationary period of six months is required. Advancement after that depends upon individual efficiency, increased usefulness, and the occurrence of vacancies in higher positions.

The salaries and conditions of employment in various branches of the field service follow. The salaries indicated are for full-time duty; for part-time duty the compensation is determined by the services rendered.

Indian Service—The entrance salary for physician in the Indian Service is \$2,400 a year, less \$300 a year for quarters, fuel and light. Employees and members of their families have the privilege of boarding at the "club" (where one is established) at a cost of \$16 to \$20 a month; children under 12 usually paying half rates. The government furnishes all drugs and equipment and means of transportation in performing visiting medical duty.

Public Health Service—The entrance salary for assistant medical officer, Public Health Service, is \$2,400 to \$3,000 a year, and for associate medical officer is \$3,000 to \$3,600; the usual entrance salary being the lowest stated for the grade, higher rates being paid only in case of unusual or arduous assignments. Any person between the ages of 23 and 31 who has had at least one year's internship in an approved hospital may subsequently take the examination prescribed by law for the regular corps. Persons between 32 and 40 years of age may take the examination for the regular corps after they have performed five years of creditable service under their appointment as assistant medical officer or associate medical officer, as the case may be. At least one year's experience subsequent to graduation is required.

Coast and Geodetic Survey—The entrance salary for surgeons in the Coast and Geodetic Survey is \$2,100 a year with allowance for subsistence at \$1.25 per diem. The number of surgeons in the Coast and Geodetic Survey actually employed and under pay at any time is six. Three of these are employed in Alaska and on the Pacific Coast and three in the Philippines. Officers serving in the Philippines are usually relieved at the end of two years. All surgeons are attached to vessels, and while their first duty is to conserve the health of the crew, it is expected that they will take part in the work of the Survey. Appointment will be confined to those who indicate willingness to accept service in any of the regions named, and who have had not less than one year's experience subsequent to graduation.

Panama Canal—The entrance salary for physician, Panama Canal Service, is \$250 a month; promotion may be made in steps of \$8.33 up to a maximum of \$300 a month, and to higher rates for special positions. The salary begins on the date of sailing for the Isthmus. Employees are supplied bachelor quarters at a charge for rent, furniture, water, electric light, and janitor service at approximately \$9 a month. Family quarters are supplied when available at a rental of \$10 to \$25 a month, according to class, and an additional charge is made for electric current, water and fuel based on the cost of the service. Meals may be obtained at the Canal Zone restaurants on the Isthmus at about 50 cents each and upward. Vacancies in the Canal Zone hospitals are filled by the detail of officers of the Medical Corps of the Army; openings for civilian physicians, therefore, occur only in the service outside of the hospitals proper, and are few and infrequent. Applicants must have had at least one year's experience subsequent to graduation.

Veterans' Bureau, Field Service—Positions of physicians and medical examiner for full-time duty. Eligibles are not required for assistant medical officer in this service. The entrance salary for associate medical officer is \$3,300 a year, for medical officer \$3,800 or \$4,000 a year (\$4,000 being for unusual assignments or speciallists), and for senior medical officer \$5,200 a year. A probationary period of six months is required; advancement after that depends upon individual efficiency, increased usefulness, and the occurrence of vacancies in higher positions; the highest salary which may be paid in each grade being associate medical officer \$3,900, medical officer \$5,000, and senior medical officer \$6,000. The salaries are without any allowances. The position of senior medical officer is seldom filled from the register, but almost invariably by the promotion of medical officers already on duty.

Apply to United States Civil Service for further particulars.

REPORTS AND NOTICES OF MEETINGS

BOSTON MEDICAL HISTORY CLUB

THE next meeting will be held on Friday, January 28th, 1927, at the Warren Museum, Harvard Medical School, at 8:15 P. M.

PROGRAM

1. Dr. Robert Knox and the Edinburg Murders, Dr. William H. Robey.
2. The Spurzheim Collection of Phrenological Casts. Dr. William P. Coues.
3. The Phrenological Societies and their Journals, Dr. John F. Fulton.
4. Presentation of a Portrait of Spurzheim to the Warren Museum, Dr. Harvey Cushing.

DR. HENRY R. VIETS, M.D., *Secretary*.

GREATER BOSTON MEDICAL SOCIETY

A REGULAR meeting of the society will be held on Tuesday, Feb. 1, 1927, at 8:15 P. M., at the Boston Medical Library, Sprague Hall.

PROGRAM

"Medical Aspects of Angina Pectoris," Samuel A. Levine, M.D.

"Sympathectomy in Angina Pectoris," Jacob Fine, M.D.

"Periarterial Sympathectomy in the Treatment of Vascular Diseases," R. B. Davidoff, M.D.

"Demonstration of a Heart from a Case of Coronary Thrombosis," Louis Wolff, M.D.
Discussion. Refreshments.

SAMUEL CLINE, M.D., *Secretary*,
353 Commonwealth Avenue,
Boston, Mass.

STAFF CLINICAL MEETING

STAFF Clinical Meeting, Boston City Hospital, Cheever Surgical Amphitheatre, Saturday, January 29, 1927, at 11 A. M.

Demonstration of cases by members of the Medical and Surgical Staff. Discussion of the cases invited.

Physicians, medical students and nurses invited.

JOHN J. DOWLING, *Superintendent*.

IMPORTANT NOTICE

DR. ALFRED ADLER of Vienna will address the Boston Society of Psychiatry and Neurology at the Boston Medical Library, Friday, January 28, at 8:15 P. M., taking as his subject "The Prevention of Neurosis."

The members of the Massachusetts Psychiatric Society have been cordially invited to attend this meeting. Dr. Adler is one of the outstanding psychiatrists of the day, and the Society

ence. Due but brief reference is given to subjects and clinical opinions which have not been experienced by the author. Discussions where difference of opinion might have been warranted are eliminated from the work and little chance for confusion of ideas is permitted. In all instances the author leaves us in no doubt of his opinions.

The chapters on development contain the usual data with new tables of standards of growth. The chapters on physiology and nutrition and feeding of infants are similar to those in previous publications by the author. The various methods of feeding are discussed but the author true to his conviction emphasizes methods which in his hands have proved successful. The chapters on diseases of infancy and childhood are most helpful giving a clear, accurate presentation of the known facts of etiology, symptomatology and differential diagnosis and treatment. Throughout, one never fails to feel the authority of the writer, his clearness of presentation, his practical point of view, the proper evaluation of the important facts as consummated in his peculiar clinical career. It is apparent that the welfare of the patients is always uppermost in the author's mind. The reviewer feels that the book should be available to all those interested in pediatrics. It should be read and studied in the manner outlined in the author's preface.

Practice of Physiotherapy. C. M. SAMPSON. 620 pp., 146 Illustrations. C. B. Mosby Co., St. Louis—1926.

Physical therapeutics has come, within the past three years, to occupy an important position in medical practice. As in any new method, the expectation of its enthusiastic supporters at the beginning has been somewhat modified by clinical experience. It is not a new system of medicine but rather modifications of some of the oldest forms of therapeutics, namely: heat, light and massage, with the addition of electricity. The value of the physical modalities depends, first, on the type and efficiency of the apparatus and, second, upon a thorough knowledge of the principles and applications of the modalities on the part of the physician. The purchase of physiotherapy apparatus, as the author rightly claims, does not make a general practitioner a physiotherapist any more than the purchase of a set of surgical instruments makes him a surgeon. Whether the place of physiotherapy in medicine is that of a specialty by itself, as the author maintains, or as an adjuvant in the office of a general practitioner, or of other specialists, time alone will tell.

Major Sampson quite frankly states in his introduction that the present volume is the result of his personal views and experiences in physiotherapy, derived largely from his work during

the war at Walter Reed and other military hospitals. No one will question the author's experience but there may be many of his more conservative colleagues who may question the results obtainable. The author, therefore, quite properly has stressed the importance both of examination of the patient in order to arrive at a proper diagnosis; and of the importance of the selection and application of a suitable modality or technic. Much more detail is given than is customary in volumes of this type, and this should prove particularly valuable to the beginner. The author's style is colloquial rather than technical, and is easily understood by the physician with a relatively slight knowledge of electrical matters.

Chapter I—is devoted entirely to "The absolute necessity for proper technic," and Chapter II to the importance of examination of patients.

Chapter III—classifies physical remedies, thermal, mechanical and electronic.

Chapter IV—describes the forms of heat. Conducted heat is heat applied in contacts and transmitted by conduction such as a hot water bottle, compresses, etc. Convective heat is heat thrown on to the body by radiation or carried to the body by currents of air, such as radiant light and heat from incandescent sources. Convective heat is energy converted into heat into the tissues themselves by the passage of an electric current. These four chapters are very short, non-technical and merely introductory.

Chapters V—IX cover various types of high frequency currents, effects of voltages as compared with that of amperage, perithermia vs. diathermia, and some technical matters in the selection and use of spark gaps.

Diathermia, which is discussed in Chapter X, is probably one of the most valuable of the heat modalities. Many physiotherapists will testify to the excellent results obtained by this modality which could be obtained in no other way. While there is still a tendency to attribute failures to faulty technic, it is, nevertheless, true that the selection and application of the electrodes as well as of the manner in which the current is applied, plays a very important part. The author gives in detail his experience and advice on these points which should be extremely valuable.

In Chapters XI and XII are short chapters devoted to the autocondensation and non-vacuum electrodes.

Chapter XIII merely mentions the ultra violet rays.

Chapter XIV discusses the static modalities at considerable length. Before the war the use of the static machine for physiotherapy purposes occupied a prominent place in the armamentarium of the physician using electrotherapeutics. Because of the bulk and technical difficulties of operating these machines and especially because many of the results accomplished could be as well obtained by simpler means, static fell

into comparative disuse. Within the past three years, however, with the introduction of better and simpler apparatus the static machine is again finding its way into use, and doubtless the author is right in maintaining that the static modalities are a necessary part of physiotherapy.

Chapter XV is on quartz ray therapy. It goes into physics of quartz lamp radiation in some detail and describes the method of application which the author has found most satisfactory in his experience.

Chapter XVI on x-ray therapy in non-malignant conditions contains some rather advanced ideas, among which is an article on "technic of selective electronization," by Chas. F. Stokes, former surgeon-general of the Navy, which may be a possible beginning of a new physical therapeutics, but as yet has not been generally accepted.

Chapters XVII and XVIII on the prevention and treatment of x-ray burns by means of ultra violet light is also a subject which is still somewhat in doubt. Many roentgenologists feel that ultra violet light has little or no value in the prevention of x-ray burns.

Chapter XIX on the galvanic and faradic currents should be of considerable value to the neurologist.

Chapters XX, on the sinusoidal current, XXI on its modifications are also important.

Chapter XXII contains some suggestions on massage as used in the author's clinic.

Chapter XXIII on hydrotherapy is rather limited to institutional work.

The second part of the volume consists of seven chapters on clinical application.

Chapter XXIV is an alphabetical list of the various diseases which can be benefited by physiotherapy. Chapter XXV on acute gonorrhea in the male, stressing ultra violet and diathermia. Chapter XXVI peripheral nerve wounds. Chapter XXVII Arthritis. Chapter XXVIII Locomotor Ataxia. A series of twelve cases are reported in which no signs of renewed activity were shown, and "as the improvement was gained by removal of pathology there is no reason to think that relapses will occur, unless the removal process is stopped too soon," and also "one of the first things noted under this treatment is a marked or complete relief of pain after a few treatments. The ability to stand alone with the eyes closed."—The author does not minimize the importance of the specific cost of salvarsan and mercury, but even so the results seem a little optimistic.

Chapter XXIX on pyorrhea alveolaris is one of the subjects of which the dental literature is full. The author mentions the use of the water cooled quartz lamp and insists on very vigorous reactions.

Chapter XXX—Hay Fever. Use of high frequency and quartz lamp in treatment of the nose and throat. The results of such treatment

have in many hands proved of considerable value.

The third section of the book on general considerations, includes trouble shooting, adapting physiotherapy to private practice or general hospitals, and definitions of the various physical and electrical modalities.

The Medical Department of the U. S. Army in the World War. Vol. XIV. Medical Aspects of Gas Warfare. Government Printing Office. 1926.

In view of the recent agitation over the use of poison gas in war, this volume is particularly timely. While some of the material, particularly certain of the laboratory investigations, has previously appeared in various journals, this is by far the most complete study of gas warfare that has yet appeared. The volume takes up organization and administration of the gas service, clinical features of gas poisoning, including statistics, and reports of research on the physiology, pathology and therapeutics of gases used in warfare.

The chapters on gas casualties and on after-effects of gas poisoning are particularly interesting. The various gases used are thoroughly discussed, and special emphasis given to mustard gas.

Illustrations are excellent and fairly numerous.

To the student of chemical warfare, and especially to the officers of the Medical Reserve Corps, this volume will be of great interest.

Aviation Medicine. By LOUIS HOPEWELL BAUER, M.D., Major, M. C. U. S. A. The Williams and Wilkins Co., Baltimore, Md. 1926.

A very readable and interesting textbook on a comparatively new subject. It deals mainly with the selection, care and maintenance of the flyer. The references are numerous and the bibliography extensive. The author reveals the vast amount of work which has been done in all phases of the subject, the problems it presents and the practical application of research in the fundamental medical sciences to a useful end. There is much of value in this book to anyone in the medical profession and should serve as a practical guide to those entering this field of medicine. It should also stimulate interest in applying many of the principles in the selection of the flyer to other fields, particularly hazardous industries. Much that remains to be learned in this subject will be applicable to medicine as a whole. While there may be points which are open to criticism by authorities in the many phases which comprise Aviation Medicine the book as a whole should receive nothing but favorable criticism. A praiseworthy beginning.

is fortunate to have this opportunity to hear him.

The regular February meeting will be postponed.

ABRAHAM MYERSON, M.D., *President*.
WINFRED OVERHOLSER, M.D., *Secretary*.

PROVIDENCE MEDICAL SOCIETY

THE Providence Medical Society will hold a joint meeting with the New England Heart Association at the Rhode Island Medical Library, Monday evening, February 7, 1927, at 8:30 P. M. The program will be as follows:

1. "Heart Disease and Pregnancy," Dr. Burton E. Hamilton, Boston.
2. "Observations on the Clinical Value of Electrocardiography," Dr. Paul D. White, Boston.
3. "The Rheumatic Heart," Dr. Frank T. Fulton, Providence.

In the afternoon at 4:30 P. M. at the Rhode Island Medical Library there will be a demonstration of heart cases by Dr. William H. Robey and Dr. Samuel A. Levine, both of Boston.

PAUL W. EMERSON, M.D., *Secretary*.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

THE Essex South District Medical Society held a regular meeting and dinner at Deer Cove Inn, Swampscott, on Wednesday, Jan. 5, 1927, at seven p. m.

Dr. James S. Stone, President of the parent society, was the guest of the evening. His address was upon the "Differential Diagnosis of Acute Abdominal Conditions in Children."

The discussion was opened by Dr. E. S. O'Keefe of Lynn, Dr. Andrew Nichols, 3rd, of Danvers and Dr. Walter Phippen of Salem.

Attendance 57. Adjourned 10:30 p. m.

WM. T. HOPKINS, *Reporter*.

HAMPDEN DISTRICT MEDICAL SOCIETY

THE regular winter meeting of the Society was held in the rooms of the Springfield Academy of Medicine, 20 Maple Street, Springfield, on Tuesday, January 25, at 4:15 P. M.

Papers presented:

"Some Common Problems in Feeding Children," A. C. Eastman.

"End Results in 600 Cases of Malignancy Treated with Radium and Deep X-ray," H. W. Van Allen.

Discussion by Fellows.

Supper was served at 6 o'clock at expense of Society.

HARVARD MEDICAL SCHOOL NEWS

At a meeting of the Faculty of Medicine held in the Faculty Room of the Medical School on January 7, 1927, the following appointments

were recommended, and were voted by the Corporation January 10, 1927.

Reappointment with change of title: 1 year from September 1, 1926, Reginald Dimock Margeson, M.D., Assistant in Anatomy and in Gynaecology, from Assistant in Anatomy.

New Appointments: 1 year from September 1, 1926, George Colket Caner, M.D., Assistant in Neurology; John Grove Kuhns, M.D., Teaching Fellow in Orthopaedic Surgery; Paul Royal Donovan, M.D., Charles Follen Folsom Teaching Fellow in Hygiene.

New Appointment: From January 1, 1927, to July 1, 1927, Marion Fletcher Eads, M.D., Teaching Fellow in Obstetrics.

New Appointment: From January 1, 1927, to September 1, 1927, Robert Norton Ganz, M.D., Assistant in Pediatrics.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY

THE regular quarterly meeting was held at Burbank Hospital, Fitchburg, Tuesday, January 25th, 1927, at 4:30 P. M.

Speaker—B. P. Sweeney, M.D. Subject—"Some Urological Problems."

RECONSTRUCTION CLINIC

THE first monthly clinical meeting of the Physical Therapeutic Department of the Reconstruction Clinic in conjunction with the twenty-first annual meeting of the New England Association for Physical Therapeutics was held on January 19, 1927, and was attended by sixty-two members of the profession.

The session was devoted to surgical diathermy applied in electro-coagulation of tonsils and hemorrhoids. After a lengthy discussion of modality and methods employed, its advantages and disadvantages over usual surgical operation, cases were presented showing different stages in the course of treatments and cases showing final results.

The outstanding features in dealing with tonsil cases, as related by Dr. M. A. Cohen, was the disappearance of the toxic symptoms following the first treatment: That the usual case requires three to six treatments seven to ten days apart: That the method should be the choice operation when presenting such complications as heart, lung and kidney lesions, high blood pressure, lues, general physical debility and last but not least the case that flatly refuses surgical operation.

Some post operative hemorrhoid cases were then presented and discussed. Discussions by:

Dr. E. C. Shattuck, New Bedford; Dr. Kope-land, California; Dr. S. Abbott, Franklin; Dr. M. R. Pratt, Swampscott; Dr. E. S. Lewis, Worcester; Dr. G. E. Percy, Salem; Dr. C. L. Pay-

MORBIDITY REPORT FOR THE WEEK ENDING
JANUARY 15, 1927

Diphtheria	31	Chickenpox	136
Last week	34	German measles	5
Diphtheria bacilli carriers	2	Influenza	24
Scarlet fever	101	Mumps	49
Last week	93	Pneumonia, lobar	32
Typhoid fever	1	Septic sore throat	4
Last week	3	Trachoma	1
Measles	17	Tuberculosis, pulmonary	31
Last week	26	Tuberculosis, other forms	2
Whooping cough	47	Gonorrhea	63
Last week	62	Syphilis	27
Bronchopneumonia	34		
Cerebrospinal meningitis	2		

NEWS ITEMS

HONORS TO DR. L. E. PHANEUF—Dr. Louis E. Phaneuf has recently been elected associate member of the Obstetrical and Gynecological Society of Paris and honorary member of the Gynecological and Obstetrical Society of Belgium.

FELLOWSHIPS IN PSYCHIATRY

Fellowships for training in extramural psychiatry are again available to a limited number of qualified applicants, announces the National Committee for Mental Hygiene, in a recent statement. These fellowships are made possible by a renewal, from the Rockefeller Foundation, for a second period of three years, of its appropriation of \$40,000 to the National Committee for Mental Hygiene, which administers the fund and directs the training of fellows.

These fellowships are designed to provide special training for physicians who have had previous hospital training in psychiatry, but who wish to prepare themselves for extramural work in child guidance, delinquency, education, dependency and industry.

Fellowships are open to physicians under 35 years of age, who are graduates of Grade A medical schools and have had at least one year of training in a hospital for mental disease, maintaining satisfactory standards of clinical work and instruction. A longer period of mental hospital training is desirable.

A different type of fellowship is also available for the training of social workers in psychiatric social work. Applicants for fellowships in psychiatric social work must hold a collegiate degree, be under 30 years of age and be free to devote themselves to a period of professional work upon completion of their training.

Applications for either type of fellowship are now being received at the National Committee for Mental Hygiene. Blanks for this purpose may be obtained by addressing Dr. Frankwood E. Williams, 370 Seventh Avenue, New York City.

TRUDEAU MEDAL AWARDED

At the annual meeting of the National Tuberculosis Association held in Washington, the Trudeau medal for 1926 was awarded to Dr. Theobald Smith. The plan is to present the medal at each annual meeting to the individual who, in the judgment of the association, has made the most meritorious contribution on the cause, prevention or treatment of tuberculosis during the previous year. The medal, known as the Trudeau Medal of the National Tuberculosis Association, was presented by Dr. Edward R. Baldwin, chairman of the committee, and was accepted in a gracious speech by Dr. Smith. Dr. Smith was the first person to distinguish between the bovine and the human bacillus of tuberculosis. This was in 1896.

Since that date Dr. Smith has been a leader in research on tuberculosis and other diseases.

"It was Theobald Smith who made mankind turn a corner. He was the first and remains the captain of American microbe hunters. . . . He showed men an entirely new and fantastic way disease may be carried . . . by an insect."—*Bulletin of the City of Chicago*.

Dr. Charles L. Connor, instructor in pathology at the Harvard Medical School, has been given a leave of absence in order that he may accept a temporary position as associate professor of pathology at McGill University.—*Science*.

NOTICES

At the annual meeting of the Trustees of the Burbank Hospital, held January 17, 1927, James J. Regan, M.D., was unanimously elected a Non-resident Consulting Oculist for the ensuing year.

HARVARD PUBLIC HEALTH SCHOOL
ANNOUNCEMENT

DURING the school month of February, there will be offered, under the direction of Dr. Joseph B. Howland, Superintendent of the Peter Bent Brigham Hospital, a course in Hospital Administration at the Harvard School of Public Health.

The course is designed as a demonstration course for public health officers, hospital trustees, and others who have connections with hospitals, and is intended to familiarize the student with the principles of construction, organization, and administration of hospitals and allied institutions.

There will be visits to hospitals in and about Boston, covering a series of typical institutions, such as general, chronic, psychopathic, tuberculosis, contagious diseases, and children's hospitals. Lectures by various authorities will be given on appropriate subjects such as Construction and Organization, Accounting, Principles of Hospital Heating, Lighting and Ventilating, Sterilizing and Laundry Methods, Hospital Records, etc. Each week there will be a Round Table Conference reviewing the work of the week. During the latter part of the course, students will be assigned to the departments of selected general hospitals for observation of methods.

The fee for the course will be \$50. Admission is based upon the consent of the Administrative Board of the School and of the Director of the Course, and is limited to members of the Medical Profession, and to Public Health Students.

For application blanks and further information, apply to The Secretary, Harvard School of Public Health, 55 Van Dyke St., Boston, Mass.

WORCESTER DISTRICT AFFAIRS

Dr. RAY W. GREENE has been elected to the Board of Trustees of the Worcester City Hospital to fill the vacancy caused by the resignation of the Hon. Peter Holmes. Dr. Greene has been a practicing physician of Worcester for forty years and has been a visiting and consulting physician to the Hospital for the past thirty years. He is the first member of the medical profession to be elected to the Board for a number of years. Dr. Greene is a member of the Worcester District and a counselor from this district to the Mass. Medical Society.

FUTURE PROGRAM OF THE WORCESTER DISTRICT

Feb. 9, 1927—Chamber of Commerce Foyer. Speaker: Dr. Bloodgood.

March 9, 1927—Memorial Hospital. Speaker: To be announced.

April 13, 1927—Grafton State Hospital. Speaker: To be announced.

May 11, 1927—Annual meeting at the Worcester Country Club.

The January meeting of the Worcester District Medical Society was held in the Foyer of the Chamber of Commerce Building on January 12, 1927. President Trowbridge presided over a short business meeting at six thirty o'clock which was followed by a reception to Dr. John Osborne Polak of New York, the guest of the evening. At seven o'clock dinner was served at the Hotel Bancroft.

About seventy-five members sat down to this dinner. Following the dinner, Dr. Trowbridge introduced Dr. Polak as the speaker of the evening. Dr. Polak is Obstetrician and Gynecologist at the Long Island College Hospital of Brooklyn, N. Y. His topic was "The Pathology and Management of Pelvic Inflammations in General Practice." Dr. Polak covered the different types of pelvic infections as to diagnosis and treatment from vagina to fundus. He laid considerable stress on conservative treatment until the infection became absolutely localized and walled off. His conservative treatment consisted of elevation of bed, blood transfusions, supportive diet and medicines, and fresh air. Surgery is not indicated until a localized abscess has formed. In the last few minutes of his talk, Dr. Polak briefly explained the technique of the low Caesarian section. The entire talk was illustrated by lantern slides which made his subject doubly interesting. Seldom has this Society heard a more instructive and convincing talk than Dr. Polak gave us. Dr. Ernest L. Hunt led the discussion of Dr. Polak's paper. The meeting was adjourned at 9:30 o'clock.

EARL E. FIPPEN.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Assistant Medical Officer
Associate Medical Officer
Medical Officer
Senior Medical Officer

Applications will be rated as received by the United States Civil Service Commission at Washington, until June 30, 1927.

There is especial need for medical officers qualified in tuberculosis or neuropsychiatry, for duty at hospitals of the Veterans' Bureau. There are a number of vacancies in positions in the Indian Service which call for training in general medicine and surgery. In addition, there is opportunity for appointment of specialists in practically all branches of the profession.

In addition to the Veterans' Bureau and the Indian Service, appointments from these examinations will be made to the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Departmental Service at Washington, and other branches.

The demand for specialized medical officers in the Federal service is constant and the supply of eligibles is rarely equal to the demand.

Applicants will not be required to report for written scholastic tests, but will be rated on their education and training, and their practical experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house in any city.

APPLICATIONS WILL BE RATED AS RECEIVED AT
WASHINGTON, D. C., UNTIL JUNE 30, 1927

Assistant Medical Officer
Associate Medical Officer
Medical Officer
Senior Medical Officer

The United States Civil Service Commission announces open competitive examinations under the above titles for filling vacancies occurring in the Federal classified civil service throughout the United States, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion.

There is especial need for medical officers qualified in tuberculosis or neuropsychiatry.

Salary and Promotion, Departmental Service—The entrance salaries for these positions in the Departmental Service, Washington, D. C., are: Assistant medical officer, \$2,400 a year; associate medical officer, \$3,000 a year; medical officer, \$3,800 a year; senior medical officer, \$5,200 a year. A probationary period of six months is required. Advancement after that depends upon individual efficiency, increased usefulness, and the occurrence of vacancies in higher positions.

The salaries and conditions of employment in various branches of the field service follow. The salaries indicated are for full-time duty; for part-time duty the compensation is determined by the services rendered.

Indian Service—The entrance salary for physician in the Indian Service is \$2,400 a year, less \$300 a year for quarters, fuel and light. Employees and members of their families have the privilege of boarding at the "club" (where one is established) at a cost of \$16 to \$20 a month; children under 12 usually paying half rates. The government furnishes all drugs and equipment and means of transportation in performing visiting medical duty.

Public Health Service—The entrance salary for assistant medical officer, Public Health Service, is \$2,400 to \$3,000 a year, and for associate medical officer is \$3,000 to \$3,600; the usual entrance salary being the lowest stated for the grade, higher rates being paid only in case of unusual or arduous assignments. Any person between the ages of 23 and 31 who has had at least one year's internship in an approved hospital may subsequently take the examination prescribed by law for the regular corps. Persons between 32 and 40 years of age may take the examination for the regular corps after they have performed five years of creditable service under their appointment as assistant medical officer or associate medical officer, as the case may be. At least one year's experience subsequent to graduation is required.

Coast and Geodetic Survey—The entrance salary for surgeons in the Coast and Geodetic Survey is \$2,100 a year with allowance for subsistence at \$1.25 per diem. The number of surgeons in the Coast and Geodetic Survey actually employed and under pay at any time is six. Three of these are employed in Alaska and on the Pacific Coast and three in the Philippines. Officers serving in the Philippines are usually relieved at the end of two years. All surgeons are attached to vessels, and while their first duty is to conserve the health of the crew, it is expected that they will take part in the work of the Survey. Appointment will be confined to those who indicate willingness to accept service in any of the regions named, and who have had not less than one year's experience subsequent to graduation.

Panama Canal—The entrance salary for physician, Panama Canal Service, is \$250 a month; promotion may be made in steps of \$8.33 up to a maximum of \$300 a month, and to higher rates for special positions. The salary begins on the date of sailing for the Isthmus. Employees are supplied bachelor quarters at a charge for rent, furniture, water, electric light, and janitor service at approximately \$9 a month. Family quarters are supplied when available at a rental of \$10 to \$25 a month, according to class, and an additional charge is made for electric current, water and fuel based on the cost of the service. Meals may be obtained at the Canal Zone restaurants on the Isthmus at about 50 cents each and upward. Vacancies in the Canal Zone hospitals are filled by the detail of officers of the Medical Corps of the Army; openings for civilian physicians, therefore, occur only in the service outside of the hospitals proper, and are few and infrequent. Applicants must have had at least one year's experience subsequent to graduation.

Veterans' Bureau, Field Service—Positions of physicians and medical examiner for full-time duty. Eligibles are not required for assistant medical officer in this service. The entrance salary for associate medical officer is \$3,300 a year, for medical officer \$3,800 or \$4,000 a year (\$4,000 being for unusual assignments or specialists), and for senior medical officer \$5,200 a year. A probationary period of six months is required; advancement after that depends upon individual efficiency, increased usefulness, and the occurrence of vacancies in higher positions; the highest salary which may be paid in each grade being associate medical officer \$3,900, medical officer \$5,000, and senior medical officer \$6,000. The salaries are without any allowances. The position of senior medical officer is seldom filled from the register, but almost invariably by the promotion of medical officers already on duty.

Apply to United States Civil Service for further particulars.

REPORTS AND NOTICES OF MEETINGS

BOSTON MEDICAL HISTORY CLUB

The next meeting will be held on Friday, January 28th, 1927, at the Warren Museum, Harvard Medical School, at 8:15 P. M.

PROGRAM

1. Dr. Robert Knox and the Edinburg Murders, Dr. William H. Robey.
2. The Spurzheim Collection of Phrenological Casts. Dr. William P. Coues.
3. The Phrenological Societies and their Journals, Dr. John F. Fulton.
4. Presentation of a Portrait of Spurzheim to the Warren Museum, Dr. Harvey Cushing.

DR. HENRY R. VIETS, M.D., *Secretary*.

GREATER BOSTON MEDICAL SOCIETY

A REGULAR meeting of the society will be held on Tuesday, Feb. 1, 1927, at 8:15 P. M., at the Boston Medical Library, Sprague Hall.

PROGRAM

"Medical Aspects of Angina Pectoris," Samuel A. Levine, M.D.

"Sympathectomy in Angina Pectoris," Jacob Fine, M.D.

"Periarterial Sympathectomy in the Treatment of Vascular Diseases," R. B. Davidoff, M.D.

"Demonstration of a Heart from a Case of Coronary Thrombosis," Louis Wolff, M.D.
Discussion. Refreshments.

SAMUEL CLINE, M.D., *Secretary*,
353 Commonwealth Avenue,
Boston, Mass.

STAFF CLINICAL MEETING

STAFF Clinical Meeting, Boston City Hospital, Cheever Surgical Amphitheatre, Saturday, January 29, 1927, at 11 A. M.

Demonstration of cases by members of the Medical and Surgical Staff. Discussion of the cases invited.

Physicians, medical students and nurses invited.

JOHN J. DOWLING, *Superintendent*.

IMPORTANT NOTICE

DR. ALFRED ADLER of Vienna will address the Boston Society of Psychiatry and Neurology at the Boston Medical Library, Friday, January 28, at 8:15 P. M., taking as his subject "The Prevention of Neurosis."

The members of the Massachusetts Psychiatric Society have been cordially invited to attend this meeting. Dr. Adler is one of the outstanding psychiatrists of the day, and the Society

ence. Due but brief reference is given to subjects and clinical opinions which have not been experienced by the author. Discussions where difference of opinion might have been warranted are eliminated from the work and little chance for confusion of ideas is permitted. In all instances the author leaves us in no doubt of his opinions.

The chapters on development contain the usual data with new tables of standards of growth. The chapters on physiology and nutrition and feeding of infants are similar to those in previous publications by the author. The various methods of feeding are discussed but the author true to his conviction emphasizes methods which in his hands have proved successful. The chapters on diseases of infancy and childhood are most helpful giving a clear, accurate presentation of the known facts of etiology, symptomatology and differential diagnosis and treatment. Throughout, one never fails to feel the authority of the writer, his clearness of presentation, his practical point of view, the proper evaluation of the important facts as consummated in his peculiar clinical career. It is apparent that the welfare of the patients is always uppermost in the author's mind. The reviewer feels that the book should be available to all those interested in pediatrics. It should be read and studied in the manner outlined in the author's preface.

Practice of Physiotherapy. C. M. SAMPSON.
620 pp., 146 Illustrations. C. B. Mosby Co.,
St. Louis—1926.

Physical therapeutics has come, within the past three years, to occupy an important position in medical practice. As in any new method, the expectation of its enthusiastic supporters at the beginning has been somewhat modified by clinical experience. It is not a new system of medicine but rather modifications of some of the oldest forms of therapeutics, namely: heat, light and massage, with the addition of electricity. The value of the physical modalities depends, first, on the type and efficiency of the apparatus and, second, upon a thorough knowledge of the principles and applications of the modalities on the part of the physician. The purchase of physiotherapy apparatus, as the author rightly claims, does not make a general practitioner a physiotherapist any more than the purchase of a set of surgical instruments makes him a surgeon. Whether the place of physiotherapy in medicine is that of a specialty by itself, as the author maintains, or as an adjuvant in the office of a general practitioner, or of other specialists, time alone will tell.

Major Sampson quite frankly states in his introduction that the present volume is the result of his personal views and experiences in physiotherapy, derived largely from his work during

the war at Walter Reed and other military hospitals. No one will question the author's experience but there may be many of his more conservative colleagues who may question the results obtainable. The author, therefore, quite properly has stressed the importance both of examination of the patient in order to arrive at a proper diagnosis; and of the importance of the selection and application of a suitable modality or technic. Much more detail is given than is customary in volumes of this type, and this should prove particularly valuable to the beginner. The author's style is colloquial rather than technical, and is easily understood by the physician with a relatively slight knowledge of electrical matters.

Chapter I—is devoted entirely to "The absolute necessity for proper technic," and Chapter II to the importance of examination of patients.

Chapter III—classifies physical remedies, thermal, mechanical and electronic.

Chapter IV—describes the forms of heat. Conducted heat is heat applied in contacts and transmitted by conduction such as a hot water bottle, compresses, etc. Convective heat is heat thrown on to the body by radiation or carried to the body by currents of air, such as radiant light and heat from incandescent sources. Conversive heat is energy converted into heat into the tissues themselves by the passage of an electric current. These four chapters are very short, non-technical and merely introductory.

Chapters V—IX cover various types of high frequency currents, effects of voltages as compared with that of amperage, perithermia vs. diathermia, and some technical matters in the selection and use of spark gaps.

Diathermia, which is discussed in Chapter X, is probably one of the most valuable of the heat modalities. Many physiotherapists will testify to the excellent results obtained by this modality which could be obtained in no other way. While there is still a tendency to attribute failures to faulty technic, it is, nevertheless, true that the selection and application of the electrodes as well as of the manner in which the current is applied, plays a very important part. The author gives in detail his experience and advice on these points which should be extremely valuable.

In Chapters XI and XII are short chapters devoted to the autocondensation and non-vacuum electrodes.

Chapter XIII merely mentions the ultra violet rays.

Chapter XIV discusses the static modalities at considerable length. Before the war the use of the static machine for physiotherapy purposes occupied a prominent place in the armamentarium of the physician using electrotherapeutics. Because of the bulk and technical difficulties of operating these machines and especially because many of the results accomplished could be as well obtained by simpler means, static fell

into comparative disuse. Within the past three years, however, with the introduction of better and simpler apparatus the static machine is again finding its way into use, and doubtless the author is right in maintaining that the static modalities are a necessary part of physiotherapy.

Chapter XV is on quartz ray therapy. It goes into physics of quartz lamp radiation in some detail and describes the method of application which the author has found most satisfactory in his experience.

Chapter XVI on x-ray therapy in non-malignant conditions contains some rather advanced ideas, among which is an article on "technic of selective electronization," by Chas. F. Stokes, former surgeon-general of the Navy, which may be a possible beginning of a new physical therapeutics, but as yet has not been generally accepted.

Chapters XVII and XVIII on the prevention and treatment of x-ray burns by means of ultra violet light is also a subject which is still somewhat in doubt. Many roentgenologists feel that ultra violet light has little or no value in the prevention of x-ray burns.

Chapter XIX on the galvanic and faradic currents should be of considerable value to the neurologist.

Chapters XX, on the sinusoidal current, XXI on its modifications are also important.

Chapter XXII contains some suggestions on massage as used in the author's clinic.

Chapter XXIII on hydrotherapy is rather limited to institutional work.

The second part of the volume consists of seven chapters on clinical application.

Chapter XXIV is an alphabetical list of the various diseases which can be benefited by physiotherapy. Chapter XXV on acute gonorrhea in the male, stressing ultra violet and diathermia. Chapter XXVI peripheral nerve wounds. Chapter XXVII Arthritis. Chapter XXVIII Locomotor Ataxia. A series of twelve cases are reported in which no signs of renewed activity were shown, and "as the improvement was gained by removal of pathology there is no reason to think that relapses will occur, unless the removal process is stopped too soon," and also "one of the first things noted under this treatment is a marked or complete relief of pain after a few treatments. The ability to stand alone with the eyes closed."—The author does not minimize the importance of the specific cost of salvarsan and mercury, but even so the results seem a little optimistic.

Chapter XXIX on pyorrhea alveolaris is one of the subjects of which the dental literature is full. The author mentions the use of the water cooled quartz lamp and insists on very vigorous reactions.

Chapter XXX—Hay Fever. Use of high frequency and quartz lamp in treatment of the nose and throat. The results of such treatment

have in many hands proved of considerable value.

The third section of the book on general considerations, includes trouble shooting, adapting physiotherapy to private practice or general hospitals, and definitions of the various physical and electrical modalities.

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The chapters on gas casualties and on after-effects of gas poisoning are particularly interesting. The various gases used are thoroughly discussed, and special emphasis given to mustard gas.

Illustrations are excellent and fairly numerous.

To the student of chemical warfare, and especially to the officers of the Medical Reserve Corps, this volume will be of great interest.

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The regular February meeting will be postponed.

ABRAHAM MYERSON, M.D., *President*.
WINFRED OVERHOLSER, M.D., *Secretary*.

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1. "Heart Disease and Pregnancy," Dr. Burton E. Hamilton, Boston.
2. "Observations on the Clinical Value of Electrocardiography," Dr. Paul D. White, Boston.
3. "The Rheumatic Heart," Dr. Frank T. Fulton, Providence.

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PAUL W. EMERSON, M.D., *Secretary*.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

THE Essex South District Medical Society held a regular meeting and dinner at Deer Cove Inn, Swampscott, on Wednesday, Jan. 5, 1927, at seven p. m.

Dr. James S. Stone, President of the parent society, was the guest of the evening. His address was upon the "Differential Diagnosis of Acute Abdominal Conditions in Children."

The discussion was opened by Dr. E. S. O'Keefe of Lynn, Dr. Andrew Nichols, 3rd, of Danvers and Dr. Walter Phippen of Salem.

Attendance 57. Adjourned 10:30 p. m.

WM. T. HOPKINS, *Reporter*.

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Papers presented:

"Some Common Problems in Feeding Children," A. C. Eastman.

"End Results in 600 Cases of Malignancy Treated with Radium and Deep X-ray," H. W. Van Allen.

Discussion by Fellows.

Supper was served at 6 o'clock at expense of Society.

HARVARD MEDICAL SCHOOL NEWS

At a meeting of the Faculty of Medicine held in the Faculty Room of the Medical School on January 7, 1927, the following appointments

were recommended, and were voted by the Corporation January 10, 1927.

Reappointment with change of title: 1 year from September 1, 1926, Reginald Dimock Margeson, M.D., Assistant in Anatomy and in Gynaecology, from Assistant in Anatomy.

New Appointments: 1 year from September 1, 1926, George Colket Caner, M.D., Assistant in Neurology; John Grove Kuhns, M.D., Teaching Fellow in Orthopaedic Surgery; Paul Royal Donovan, M.D., Charles Follen Folsom Teaching Fellow in Hygiene.

New Appointment: From January 1, 1927, to July 1, 1927, Marion Fletcher Eads, M.D., Teaching Fellow in Obstetrics.

New Appointment: From January 1, 1927, to September 1, 1927, Robert Norton Ganz, M.D., Assistant in Pediatrics.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY

THE regular quarterly meeting was held at Burbank Hospital, Fitchburg, Tuesday, January 25th, 1927, at 4:30 P. M.

Speaker—B. P. Sweeney, M.D. Subject—"Some Urological Problems."

RECONSTRUCTION CLINIC

THE first monthly clinical meeting of the Physical Therapeutic Department of the Reconstruction Clinic in conjunction with the twenty-first annual meeting of the New England Association for Physical Therapeutics was held on January 19, 1927, and was attended by sixty-two members of the profession.

The session was devoted to surgical diathermy applied in electro-coagulation of tonsils and hemorrhoids. After a lengthy discussion of modality and methods employed, its advantages and disadvantages over usual surgical operation, cases were presented showing different stages in the course of treatments and cases showing final results.

The outstanding features in dealing with tonsil cases, as related by Dr. M. A. Cohen, was the disappearance of the toxic symptoms following the first treatment: That the usual case requires three to six treatments seven to ten days apart: That the method should be the choice operation when presenting such complications as heart, lung and kidney lesions, high blood pressure, lues, general physical debility and last but not least the case that flatly refuses surgical operation.

Some post operative hemorrhoid cases were then presented and discussed. Discussions by:

Dr. E. C. Shattuck, New Bedford; Dr. Kope land, California; Dr. S. Abbott, Franklin; Dr. M. R. Pratt, Swampscott; Dr. E. S. Lewis, Worcester; Dr. G. E. Percy, Salem; Dr. C. L. Pay-

sant, West Medford; Dr J. F. Valentine, Danvers; Dr. E. H. Baxter, Hyde Park; Dr. A. H. Ring, Arlington; and Dr. F. B. Collothen, Dr. D. G. Wilcox, Dr. S. J. Harris, Dr. G. J. Ott of Boston.

Clinical session conducted by M. A. Cohen, M.D., and L. Feldman, M.D., directors of the department.

Next clinical demonstration to be announced in the JOURNAL.

E. G. MITCHELL, M.D., Clerk.

THERE was a special meeting of the Medical Staff of the Lawrence General Hospital at the Nurses' Home on Friday, January 21, at 11 A. M.

The Staff voted to institute a Local Diagnostic Cancer Clinic under the authority of the Department of Public Health in accordance with the recent Act of the Legislature.

SOCIETY MEETINGS

DISTRICT MEDICAL SOCIETIES

Essex North District Medical Society

Wednesday, May 4, 1927—Annual meeting. Russell Hall Young Men's Christian Association Building, 40 Lawrence Street, Lawrence.

Thursday, May 5, 1927—Censors meet for examination of candidates at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M.

Essex South District Medical Society

Wednesday, February 2, 1927—Hawthorne Hotel, Salem. Dr. H. H. Clute of the Lahey Clinic, "Differential Diagnosis and Treatment of Thyroid Disease." Discussion by Drs. Johnson of Beverly and Fields of Salem, ten minutes each.

Wednesday, March 2, 1927—Lynn Hospital. Clinic, 5 P. M.; supper, 7 P. M. Dr. George Minot, "Pernicious Anemia, with Special Reference to Liver Diet." Discussion by Drs. Sargent of Salem and Reynolds of Danvers, ten minutes each.

Wednesday, April 6, 1927—Danvers State Hospital. Clinic 5 P. M. Dr. Allan W. Rowe, Chief of Research Service at Evans Memorial, "The Differential Diagnosis of Endocrine Disorders." Followed by dinner. Discussion by Drs. Wood of Haverhill and Kline of Beverly, ten minutes each.

Thursday, May 5, 1927—Censors meet for examination of candidates at the Salem Hospital, 3:30 P. M.

Wednesday, May 11, 1927—Annual meeting. The Tavern Gloucester. Speaker and subject to be announced later.

Norfolk District Medical Society

Below are the proposed meetings of the Norfolk District for the remainder of the year. Minor changes may be made in case of necessity.

March 1, 1927—Roxbury Masonic Temple, 8:15 P. M. Dr. Robert B. Greenough. To be devoted to a talk on cancer, with a résumé of the results of colloidal lead treatment.

March 29, 1927—Roxbury Masonic Temple, 8:15 P. M. Drs. F. S. Newell and F. J. Irving, "The Modern Treatment of the Eclampsias and Toxæmias of Pregnancy." If time permits—"The Modern Methods of Handling Prospective Caesarean Cases."

May 10, 1927—Annual meeting. Details of meeting to be announced.

Suffolk District Medical Society

Meetings of the Suffolk District Medical Society and the Boston Medical Library will be held at the Boston Medical Library 8 The Fenway, Boston, at 8:15 P. M., as follows:

February 23, 1927—Surgical Section. "Clinic on Neurological Cases at the Peter Bent Brigham Hospital," Dr. Harvey Cushing.

March 29, 1927—Medical Section. Subject and speaker to be announced later.

April 27, 1927—Annual meeting. Election of officers. "Medical Education in the Orient and Occident," Dr. David L. Edsall Dean, Harvard Medical School.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.

BOOK REVIEWS

Obstetrics. By JOHN S. FAIRBAIRN, M.A., B.M., B.Ch. (Oxon.); F.R.C.P. (Lond.); F.R.C.S. (Eng.). Oxford Medical Publications, Lon-

don and New York: Oxford University Press, 1926.

This small volume is one of the Oxford Medical Handbooks whose purpose is to deal briefly with the fundamental principles underlying the various subjects presented, illustrating their application in general practice. The author defines obstetrics as the "raising of the healthiest new stock with the least damage to the old" and he goes on to say "it will be obvious that obstetrics forms part of a much wider study, that of human reproduction, its hygiene and disorders." This point of view dominates the whole book and gives a most refreshing outlook upon a somewhat stereotyped subject. Such chapter headings as "The place of obstetrics in medicine and the public health service," "The physiology of reproduction" and a contrasted chapter on "The pathology of reproduction," give an idea of the scope of the work. There is a chapter on the management of pregnancy and others on the management of the new-born child, the management of lactation and maternal mortality. In addition considerable space has been devoted to a sketch of the fundamental principles underlying the more routine phases of obstetrics. The book has been written by an expert and seems admirable in every way. The aim of the series has been successfully carried out.

Clinical Pediatrics. By JOHN LOVETT MORSE, A.M., M.D. Philadelphia and London: W. B. Saunders Company. 1926.

The preface of Dr. Morse's book gives the reader a most accurate exposition of its purpose and contents. It is written in part as a personal gratification and also to review and formulate more concretely the author's long and wide clinical experience in the various chapters of pediatrics. By this a secondary purpose, namely to interest physicians and medical students in the subject, has been obviously fulfilled. There is no attempt on the part of the author to contribute new data to the subject but a unique attempt has been made to present practical material from personal experience with emphasis upon the common, more important phases as based upon an unusual personal experience. It is a book that could only have been written by an accurate observer with an extensive and versatile experience. It is not unlike in this particular to many of our best English texts on medical subjects with the injection of personal observations and opinions.

The treatment of the subject matter conforms to the usual methods in regard to classification of material but emphasis is given those phases which the author has been most interested in and in which he has had most experi-